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STATE DISPOSAL OF THE AGRICULTURAL COLLEGE LAND SCRIP

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Published histories of state colleges of agriculture contain only brief and usually inadequate references to the disposal of the endowments of land or of land scrip granted by Congress. Some writers, indeed, seem unaware that most of the "land-grant" colleges received not land but scrip which could be used as currency in the purchase of certain categories of public land.¹

Under the Act of July 2, 1862, the federal government donated to the states land or scrip to the amount of 30,000 acres for each Senator and Congressman.² States in which there lay a sufficient supply of public land open to private entry at \$1.25 an acre were given the right to select their entitlements within their own borders from that class of land.³ Under this provision eleven states selected 1,769,440 acres.⁴ Public land states later admitted to the Union received similar grants.⁵

The federal government issued scrip to states in

which public land open to private entry at \$1.25 an acre was non-existent or insufficient. The scrip could be used by assignees of the beneficiary states to purchase public land open to this class of entry in other states or territories.⁶ Twenty-seven states eventually received scrip instead of land and almost eight million scrip-acres were so issued.⁷

How did the states convert this grant of scrip into an income producing endowment for the land-grant colleges? How well did they perform their trust in administering the federal grant? What were the conditions under which the scrip came on the market? It is to these and associated questions that this paper is devoted.

Most important of the restrictions on the use of college scrip imposed by Congress was that prohibiting the states from entering, i.e., acquiring land themselves. Their assignees might enter land but the states themselves might not. Whether the colleges constituted independent assignees or were to be construed as agencies of their respective states was a question never adjudicated. Most of the states seem to have assumed that the colleges were barred from entering land and thus either sold the scrip or conveyed it to colleges that sold it. Brown University, to which Rhode Island assigned its scrip, did succeed in entering some land after successfully challenging an adverse ruling of the General Land Office, and the University of Illinois used about five per cent of its scrip for the acquisition of investment land.⁸

¹ The inflationary character of this scrip and other public land paper issued by the federal government has gone unnoticed by scholars. It may be regarded as evidence of non-interest-bearing debt or as a restricted currency. Equally ignored by economists and historians is the effect on the economy of paying subsidies to transportation, education, defense, settlement, and a host of other activities in the form of land rather than cash derived from tax collections. It represented a kind of deficit finance in which the government met its obligations by drawing on its balance of physical assets.

² *U. S. Statutes at Large*, 12: 503.

³ "Open to private entry at \$1.25 an acre" described public land that had been offered at public sale after proclamation and had gone unsold. Unoffered land was open to entry only under the Pre-emption Act of 1841. Earlier federal donations to the states were not restricted. The internal improvements grant under the act of 1841, for example, could be selected from the unoffered lands in the beneficiary states.

⁴ The nominal grant was 1,770,000 acres but, in conformity with the law, the selections had to be made in units of quarter-sections. States whose entitlements were not a multiple of 160 acres were thus each deprived of eighty acres.

⁵ The Commissioner of the General Land Office ruled in 1875 that the statute operated prospectively to effect grants to new states upon admission to the Union. Thomas Donaldson, *The Public Domain, Its*

History with Statistics (47 Cong. 2 sess., House Misc. Doc. no. 45, serial 2158, Washington, 1884), 229.

⁶ The act of July 1, 1870, authorized the acceptance of agricultural college scrip in payment of pre-emption claims. *U. S. Statutes at Large*, 16: 186. Squatters were thus permitted to enter unoffered land although non-residents were still excluded.

⁷ Donaldson, *The Public Domain*, 229-230. Donaldson's totals are slightly excessive as he credits several states with their legal entitlement rather than the next lower multiple of 160 acres.

⁸ Paul W. Gates, *The Wisconsin Pine Lands of Cornell University* (Ithaca, 1943), 37-39, 43-44. I am indebted to Professor Gates for a number of suggestions used in the preparation of this article.

The law providing for the grant prohibited the use of scrip for entering land before July 2, 1863. Even by that date the General Land Office, chronically behind in its work, had not yet issued the scrip to the states.⁹ Most of the state legislatures were equally slow in providing for the disposal of the scrip, and marketing extended over a nine-year period from March 1864 to April 1873.

Delays of the state governments may be explained in a number of ways. Preoccupation with Civil War problems was not insignificant, but in some states there was massive indifference and even hostility to the establishment of state supported colleges of agriculture and engineering. Almost everywhere opposing groups contended for the allotment of the federal subsidy to existing institutions. Everywhere there was ignorance as to the probable value of the grant. Public-land paper was a currency unfamiliar in the east to all but a handful of dealers and investors. Most of the scrip fell to states distant from the public lands.¹⁰ How best to liquidate it was a new problem in state administration. Many of the legislators and administrators tended to over-value the scrip in terms of actual market factors. Inexperienced in converting land paper to land, many seem to have believed that its value should approximate the price of the land that could be acquired with it. Actually, of course, the General Land Office was selling little public land at the \$1.25 price in the years 1862-1866.¹¹ Furthermore, land paper had always sold at a discount because of the cost of "locating," or finding attractive public land to enter with it. Investors in land had accumulated a body of experience in using veterans' land warrants in the years 1847-1862. Cyrus Woodman, an old hand at the business, wrote in 1867 that men getting ten dollars a day to locate land with warrants were "worthless" and offered to pay a reliable agent one fourth of the land he secured.¹²

Insured transportation and interest on the investment in idle paper were but two of several items in the cost of using land paper.

Finally, supply and demand factors were operating to diminish the value of college scrip. Most of the veterans' land warrants had come on the market in the years before June 30, 1860, when there was a high rate of demand from both settlers and investors. It is probable that during the 1850's land entry had outrun settlement and development of new land, and much attractive and accessible land in private hands was still unexploited.¹³ Lands available to entry were correspondingly remote. On top of this backlog of excessive entry came the Civil War and the adoption of the Homestead Act. The Civil War diverted an undetermined number of prospective entrymen from the public land. The Homestead Act disturbed the market in two ways. It not only took prospective settlers out of the market for land paper, but threatened that much land open to private entry would be claimed by homesteaders.

With this background we may trace and interpret the disposal of the scrip by the states. The process was generally one of disappointment; the irony is that the southern states, where opposition to the defeated land-grant bill of 1857-1859 was most pronounced, were the ones to realize the best proceeds from the scrip. When they finally got their scrip after the war it was sold on better terms than the northern states generally secured and the quantity was increased by the termination of the old three-fifths rule governing representation in Congress.

The few northern states that moved promptly in 1864 did better than those that delayed until 1866 or 1867. In March and April, 1864, Vermont sold 150,000 acres at an average of 81.8 cents.¹⁴ Veterans' warrants, eligible for use on both offered and unoffered land, were then selling in New York

⁹ Scrip due the northern states was issued in August, 1863. *Ibid.*, 38.

¹⁰ Under the ratio prescribed by Congress in 1862, 44.1 per cent of all the scrip eventually issued went to the populous states north of the Potomac and east of the Alleghenies.

¹¹ In the fiscal years 1862-1866 land sales for cash averaged only 323,000 acres a year, as compared with an average of over 5,000,000 a year in the preceding decade.

¹² Cyrus Woodman to E. Brown, July 16, 1867, in the Woodman Papers, State Historical Society of

Wisconsin, Letter Book, 21: 372. I am indebted to Dr. Larry Gara of Mexico City College, whose familiarity with the Woodman Papers enabled him to call my attention to a number of specific letters and thus to speed my investigation.

¹³ Average annual entry with cash and paper during the decade ending June 30, 1860, was 9.57 million acres. Two million acres of military bounty warrants were entered in the following year, but the average for the decade of the 1860's was only half a million.

¹⁴ Senate of the State of New York, *Document* 103, 97 sess. (1874), p. 400-401.

for around 90 cents.¹⁵ Most of the Vermont scrip was taken by two experienced New York dealers. George Woodman reported that he had purchased 60,000 acres and that John Thompson had taken a major part of the rest.¹⁶ Both of these men were typical Wall Street dealers in bank notes, government bonds, land warrants, and other negotiable paper. Thompson, publisher of the familiar *Bank Note Reporter*, had, like George Woodman, good connections in the West.¹⁷

Connecticut, in selling 180,000 acres of scrip at 75 cents, in May 1864, was almost equally fortunate in view of the condition of the market.¹⁸ At retail the scrip would bring not more than 85 cents and the state of New York sold only 76,000 acres in small lots at that price.¹⁹ Other states had similar experiences of trying to sell scrip in retail lots to small purchasers. Administrative expenses on such sales were high and, in terms of prevailing interest rates, inventory costs on unliquidated scrip were substantial. Eventually the states learned that a higher net could be realized by prompt sale to a dealer.

The Massachusetts record is obscure. In June 1864 George Woodman was approached to make a corrupt deal with the state executives under which they would turn over the scrip on favorable terms in exchange for a kickback. Woodman was dubious about the prospects of profit in case other states should throw their scrip on the market, and rejected the offer.²⁰ The state seems thereafter to

have attempted to sell the scrip at retail. Prior to 1866 about 140,000 acres had been sold at an average price of 81 cents.²¹

By December 1864 the market for college scrip had broken. New Jersey started selling at 70 cents but, after placing 36,000 acres at that price, unloaded the remaining 173,920 acres at 50 cents to Hiram Slocum and Francis Howland of New York in late October, 1865.²² By that time the prospect of an abundance of offerings had led to collapse. Congress had not yet passed a relief act and the states were under mandate to establish their colleges by July 2, 1867.²³

In December 1865 the commissioners appointed to sell the Ohio scrip at the statutory minimum of 80 cents reported that they had sold only 11,040 acres, or about 8 per cent of the state's grant. They asserted that in response to their invitation to other states, an agreement had been reached to set a price of 80 cents but that some states had chiseled on the fixed price and that the market had broken in consequence.²⁴

In March 1866 Maine found that it could place small quantities at relatively high prices but that in order to sell most of its 210,000 acres it was necessary to accept wholesale bids at a little over 53 cents. David Preston of Detroit bid for varying quantities at different prices and finally took 96,000 acres at 53½ cents. Cyrus and George Woodman, perhaps through the collusion of state officers, were permitted to take 60,000 at the lowest price of 52½ cents.²⁵ In April of the same year West Virginia sold 80,000 acres to J. H. Atkinson and 60,000 acres to T. K. McCann at 52 cents. The remaining 9,920 acres had been sold earlier at somewhat higher prices to give the state an average return of about 52½ cents an acre.²⁶

¹⁵ The quotation is for 160-acre warrants, comparable in size to the individual pieces of agricultural college scrip. Warrants of smaller denomination always brought better prices. George Woodman to Cyrus Woodman, April 2, 1864, in Woodman Papers, Letters Received, 20: 318.

¹⁶ George Woodman to Cyrus Woodman, April 21, 1864; *ibid.*, 20: 324.

¹⁷ A careful study of Thompson as a financier is long overdue. See the inadequate sketch in the *Dictionary of American Biography*, 18: 462-463, and the suggestive notes in Fritz Redlich, *The Molding of American Banking* (New York, 1951), pt. 2, *passim*.

¹⁸ Benjamin F. Andrews, *The Land Grant System of 1862 and the Land Grant Colleges*, U. S. Dept. of Interior, Bureau of Education, *Bulletin*, 1918, no. 13, p. 14-15. Subsequent citations: Andrews, *The Land Grant System*.

¹⁹ Samuel D. Halliday, *History of the Agricultural College Land Grant Act of July 2, 1862*... (Ithaca, 1905), 21.

²⁰ George Woodman to Cyrus Woodman, June 7, 1864, in Woodman Papers, Letters Received, 20: 329.

²¹ New York Senate, *Document* 103, p. 373.

²² *Ibid.*, 374-375. The 36,000 acres was sold in several lots to "parties in New Jersey."

²³ The original land-grant act required acceptance of the grant within two years and the establishment of the required college within five years. The act of April 14, 1864, extended to April 14, 1866, the deadline for acceptance. The deadline to establish a college was later repeatedly extended by general statute or by joint resolutions relating to specific states, but passage of these measures could not be anticipated with certainty.

²⁴ Thomas C. Mendenhall, ed., *History of the Ohio State University* (4 vols., Columbus, 1920), 1:9.

²⁵ New York Senate, *Document* 103, p. 371-372.

²⁶ *Ibid.*, 401-402.

It was at this stage, in the summer of 1866, that another dealer, Gleason F. Lewis of Cleveland, Ohio, came into the market. Eventually he was to secure a monopoly of agricultural college scrip and to buy most of what was thereafter offered. Between July 1866 and April 1873 he bought almost five million acres of scrip, or 67.7 per cent of all that was issued and marketed. His transactions in land paper were strictly those of a dealer. He bought and sold scrip and veterans' warrants on a small spread but never acquired an acre of public land. His achievements were to secure control of the supply of college scrip and to develop a wide market for its sale. In both fields he was more astute than other dealers like George Woodman, John Thompson, or Lunt, Preston and Kean of Chicago and Detroit.²⁷ From an early date, Woodman recognized the scale of operations necessary to effect a monopoly and generally took so pessimistic a view of the retail market that he was never a major figure in the business.²⁸ After his purchases from Vermont and Maine he never again succeeded in bidding sufficiently high to get any more from the states although he may have occasionally stocked his shelves from the supply held by other dealers.²⁹ Thompson's only sizeable purchase after 1864 was of 180,000 acres from South Carolina in October, 1870.³⁰ Preston occa-

sionally bid but, apart from his Maine purchase, seems to have secured only 16,000 acres which he took from Pennsylvania in 1866, and 48,000 acres from the same source in 1867.³¹

Lewis got his start in the land-paper business in the mid 1850's when supply and demand both rose sharply.³² Between 1847 and 1855 Congress voted to military veterans land-grant bounties on the basis of which claims to sixty-one million acres were established by half a million beneficiaries. Until 1852 only the veterans or their heirs could use the warrants in land entry. Most of them had no desire to do so and their bounties consequently went unclaimed. Congress eventually made the warrants negotiable and a regular market for them developed at a time when purchase of public land reached its all time peak.³³

To reach both sellers and buyers of land paper, Lewis published the *Old Soldiers Advocate* at Cleveland, Ohio, from 1859 to 1878.³⁴ This monthly newspaper, purportedly devoted to veterans' interests, was mainly an advertising medium for Lewis's business activities. It was as much designed to reach the mass sales market as to establish contact with sources of warrants. The extent of this market has not been accurately determined by systematic analysis of Land Office records, but it is clear that the market was much broader than scholars have sometimes thought. It is true that

²⁷ On this firm of Chicago bankers, see Henrietta Larson, *Jay Cooke, Private Banker* (Cambridge, 1936), 339; F. Cyril James, *The Growth of Chicago Banks* (New York, 1938); and Redlich, *American Banking*, pt. 2, *passim*. Preston was also an investor in land and entered some or all of his scrip. Gates, *Wisconsin Pine Lands*, *passim*.

²⁸ Cyrus Woodman proposed the corner to his brother; George promptly replied that "it would take too many dimes," as probably eight or ten million scrip-acres would be issued. Cyrus Woodman to George Woodman, April 19, 1864, in Woodman Papers, Letter Books, 16: 635. George's response of April 21 will be found in the Woodman Papers, Letter Books, 20: 324.

²⁹ In 1867 George entered a bid on some of the Pennsylvania scrip but failed to secure any. Woodman Papers, Letters Received, 26: 450. I find no evidence that the Woodmans dealt with Lewis. George Woodman bought 8,000 acres at 65 cents in November from an undisclosed source. George Woodman to Cyrus Woodman, November 30, 1864, *ibid.*, 20: 359.

³⁰ H. H. Kimpton, State Financial Agent, to A. J. Ransier, President of the State Senate, Columbia, S. C., February 16, 1871. Historical Commission of South Carolina, Columbia, Reconstruction Period Collection.

³¹ Asa E. Martin, "Pennsylvania's Land Grant under the Morrill Act of 1862," *Pennsylvania History*, 9: 111 (April, 1942). Preston bid at varying prices for varying quantities of Pennsylvania scrip in April, 1867, but secured only 48,000 acres at 55½ cents, *ibid.*

³² Lewis was born at East Aurora, New York, November 11, 1820, and died at Jefferson, Ohio, on December 11, 1903. His entire business career centered in Cleveland and its suburbs. Other biographical information is scant; an obituary is found in the *Cleveland Leader*, December 12, 1903. Sketches in *Lewisiana*, or the *Lewis Letter*, a monthly inter-family paper edited by Frank P. and Carroll A. Lewis (17 vols., Lisle, New York, 1887-1907), are unreliable.

³³ Act of March 22, 1852, U. S. *Statutes at Large*, 10: 3. I am aware that various subterfuges were used to evade the prohibition on assignment before that date. In the two years ending June 30, 1856, the General Land Office sold almost thirty-five million acres, of which 28 per cent was bought with military warrants.

³⁴ The only known file, irregular, is in the Western Reserve Historical Society, Cleveland. In the same repository will be found the only known business records of Gleason Lewis. They relate entirely to his business in land warrants.

the use of college scrip was less diffuse than that of military warrants and that it was used in California and in the Lake states timberlands mainly by large investors. In Kansas and Nebraska, however, college scrip was probably more used by settlers than by absentees. In every land office town in the west there were dealers who dealt in land paper and many of them served as outlets for Lewis's purchases.³³ Lewis dealt with the ultimate market rather than with metropolitan dealers. There is no evidence that he ever sold to the Woodmans, Thompson, or Preston, Lunt and Kean, but he probably supplied scrip to large-scale entrymen.

Lewis came into the market at a strategic moment. By the summer of 1866 most of the scrip that had been sold by states had been used for land entry and there could have been little in dealers' hands, but the prospects for the states were not at all improved.³⁴ They had failed to protect their interests by creating an agency for the orderly marketing of their scrip; they had discovered that they could not sell at retail effectively, and they realized that the supply of scrip hanging over the market would soon be augmented as the southern states received theirs. Worse still, the five public land states of the south would be closed to entry with college scrip and almost a million acres of scrip, not previously expected, would be issued to them.³⁵ The time was auspicious for the building of a monopoly by a man of resources and courage.

In July 1866 Lewis made his first purchase. He took the entire Kentucky issue of 330,000 acres at 50 cents.³⁶ Whether in this and later purchases

Lewis connived with state officials, we do not know. George Woodman claimed that he had offered to take the whole lot at 52½ cents and suspected corruption.³⁷

In the next seven years Lewis was to pay over \$3,500,000 for college land scrip. How far he was dependent on outside capital we do not know. In one of his many letters to Ezra Cornell he asserted that "the men behind me in this business are men of money and so far have always furnished all I asked for. I think it will continue".³⁸ Lewis held some valuable real estate in downtown Cleveland which he mortgaged to the firm of Fisher, Boothe, of Detroit. The same firm appears as his "associates" in buying the North Carolina scrip, and is mentioned as his backing in another project.³⁹ They probably supplied some capital to him, but there is evidence that he found it easier to make purchase contracts with the states than to meet the installments.⁴⁰ In many cases he dealt with the states on a hand-to-mouth basis, receiving batches of scrip C.O.D. and endlessly trying to stall off threats from the states and lobbying at state capitals to prevent auctions of scrip until he was ready to bid.⁴¹ Whatever the source of his capital, Lewis was certainly the entrepreneur and manager who made the contacts—and the contracts. His chief capital, perhaps, was his audacity in bidding and his well-developed market for land paper.

Within a few weeks of his Kentucky purchase, Lewis took from Pennsylvania 76,800 acres at 55 cents and 76,640 at 55½ cents. Pennsylvania, with a total grant of 780,000 acres, had tried with little success to retail it at high prices. Down to April 1866 they had sold but 27,000 acres and the commissioners then invited bids with no minimum

³³ Lewis listed his field agents in the *Old Soldiers Advocate*, e.g., issue of June, 1871.

³⁴ By June 30, 1866, 1.3 million acres of college scrip had been used to locate land. About the same amount had been sold by the states or used directly by them to locate land.

³⁵ Under the act of June 21, 1866, the public land in Alabama, Arkansas, Florida, Louisiana, and Mississippi was closed to all forms of entry except eighty acre homesteads. *U. S. Statutes at Large*, 12: 503. The effect of this law was not only to exclude scrip from entry in those states, but to give those states scrip instead of land for their college grants. In a brief note dealing with this matter, I have suggested that the latter effect was probably advantageous to the interests of the states. *Journal of Southern History*, 19: 216-220 (May, 1953).

³⁶ The date and price are given in New York Senate Document 103, p. 367. The statement that Lewis was

the buyer rests on his own assertion in the *Old Soldiers Advocate*, December, 1871. The only inaccuracy in his statements that I have discovered are the intimations that he bought entire issues when we know that he purchased only a large, or residual part.

³⁷ George Woodman to Cyrus Woodman, July 10, 1866, in Woodman Papers, Letters Received, 24: 349, and same to same, July 11, 1866, 24: 351.

³⁸ Gleason F. Lewis to Ezra Cornell, April 19, 1867. Regional History Collection, Cornell University.

³⁹ Andrews, *The Land Grant System*, 36. *Louisiana*, 16: 191-192; Mortgage Records, Cuyahoga County, Ohio.

⁴⁰ Notably in the case of the purchase of the Delaware scrip. Evans Papers, MS No. 8169. University of Delaware.

⁴¹ *Ibid.*, MS No. 38; North Carolina, Virginia, and a number of other states made COD sales.

price. Under this dispensation they sold about 225,000 acres before February 1867, with Lewis as the chief bidder.⁴⁴

Ohio followed the same pattern. The state law of April 1865 setting a minimum price of 80 cents was repealed a year later after disappointing sales. The state commissioners reserved 27,520 acres for retail sales and sold the remaining 575,800 acres in 1866 at 53 cents, of which Lewis took 400,000 acres. On Ohio's whole grant of 630,000 acres the state had netted, after three years' delay, an average of 55.8 cents.⁴⁵

In the first seven months of 1867 Lewis bought not less than 1,420,800 acres of scrip. In January, notwithstanding the efforts of Cyrus and George Woodman to purchase inside information that would enable them to bid a shade higher, Lewis captured New Hampshire's 150,000 acres,⁴⁶ and in March he got Maryland's 210,000, both at a little over 53 cents.⁴⁷ During the same month he bought 112,000 acres at 54 cents from Massachusetts after that state abandoned its higher asking price, and probably bought another 108,000 later in the year.⁴⁸ In April Indiana offered its scrip at auction and Lewis, bidding 54 cents, took 366,080 acres of the total grant of 390,000 acres.⁴⁹ Pennsylvania had meanwhile decided to offer the 520,000 acres that had not previously been offered and the state board set a tentative minimum price of 55 cents. Lewis took 37,760 at 55½ cents and later an additional 275,200 at 55 cents on which another bidder had defaulted.⁵⁰ In July Lewis, associated with David Preston and Fisher, Boothe of Detroit bought all of North Carolina's grant of 270,000 acres at 50 cents.⁵¹

Use of college scrip for land entries jumped from

651,000 acres in the fiscal year 1866 to 2,420,000 in fiscal 1867. The following year saw almost two million acres entered with scrip. Market demand was good and Lewis was able to liquidate his inventory rapidly. By October 1867 he reported that his stock was reduced to 250,000 acres and that he was looking for more.⁵² His optimism may have misled him, for the next month without apparent competition he contracted with the trustees of the University of Illinois to take 100,000 acres at the then high price of 90 cents.⁵³ In the preceding six months the state had sold 180,000 acres at 54 cents and 100,000 at 58 cents, but none of this apparently came into the hands of Lewis.⁵⁴

With prices suddenly stiffening and much of the southern scrip still unmarketed, Lewis began negotiations with Ezra Cornell to co-operate in holding the retail price. In 1866 Cornell had bought from the state of New York a little over 900,000 acres after the state had failed to sell more than 76,000 acres at retail. Cornell agreed to donate to Cornell University any profits that he might make from his land operations. He used 500,000 acres to locate pine lands in Wisconsin and 12,000 acres for entries elsewhere, and was confident that acquisition of land was the soundest long-term disposal of the scrip. But the land was costly to locate, hold, and protect from depredation, and it produced little immediate revenue. President Andrew D. White of Cornell and some of his trustees were pressing for the liquidation of the University's capital assets. Under their pressure Cornell gave way and agreed to sell the remaining scrip. During early 1868 he negotiated with Lewis and in April sold him 100,000 acres at 90 cents and 180,000 acres at \$1. In December he was to sell him the remaining 101,920 acres at 86 cents.⁵⁵

Congress was moving meanwhile towards a partial repudiation of its contract with the states. The offer embodied in the original act of 1862 contained only the restriction that not more than one million acres of college scrip could be entered in any one state. In 1866 Congress closed the public land states of the south to scrip entries. In 1867 Senator

⁴⁴ Asa E. Martin, "Pennsylvania's Land Grant," 9: 85-117.

⁴⁵ Mendenhall, ed., *Ohio State University*, 1: 9-10; New York Senate, *Document* 103, p. 379.

⁴⁶ George Woodman to Cyrus Woodman, July 10, 1866, in Woodman Papers, Letters Received, 24: 349. Lewis is identified in a letter, same to same, January 25, 1867, 26: 432.

⁴⁷ Maryland, Comptroller of the Treasury Department, *Annual Report* (Fiscal year September 30, 1867, Annapolis, 1868), xi-xii.

⁴⁸ Massachusetts, Archives Division, MS Council Records. Entry of March 27, 1867.

⁴⁹ William M. Hepburn and Louis M. Sears, *Purdue University* (Indianapolis, 1925), 34.

⁵⁰ Martin, "Pennsylvania's Land Grant," 111.

⁵¹ New York Senate, *Document* 103, p. 375.

⁵² Gleason Lewis to Ezra Cornell, October 16, 1867. Regional History Collection, Cornell University.

⁵³ "First Annual Report of the Board of Trustees of the Illinois Industrial University," in *Report Made to the General Assembly of Illinois*, 26 sess. (1869), 2: 127.

⁵⁴ *Ibid.*, 99.

⁵⁵ The disposal of New York's scrip is treated in Gates, *Wisconsin Pine Lands*.

Alexander Ramsey of Minnesota proposed to restrict entries in any one township to an aggregate of five sections.⁶⁶ This proposal was defeated but the following year a bill was offered that would impair the value of the scrip and change the terms on which the states had accepted the federal offer by putting a ceiling of three sections of college scrip entry in any township. Lewis lobbied against passage of the bill and attempted to organize protests among the states,⁶⁷ but his efforts were vain and the bill became law on July 27, 1868.⁶⁸ Passage of the act did not seriously depress the price of scrip, but it showed the sensitivity of Congress to pressure from squatters. Politicians had learned the advantages of standing before the people as enemies of land investors. The trend was confirmed by the passage of a bill in 1870 that authorized the use of college scrip in payment of pre-emption entries.⁶⁹ The effect of this act was to discriminate against absentee investors by permitting only settlers under the pre-emption law of 1841 to enter unoffered land with college scrip and by waiving the million-acre ceiling for such entries.⁷⁰ Nonresidents were still confined to the offered lands.

Lewis had contracted in May 1868 to buy Tennessee's 300,000 acres of scrip at 90½ cents, after exerting what pressure he could to delay its issue so that he could clear his shelves.⁷¹ He had contracted in July 1867 to take the North Carolina scrip, but it had not yet been delivered as the state had not been readmitted.⁷² Under the provisions of a joint resolution of Congress, delivery of scrip to the states of the former Confederacy was prohibited until they "shall be fully restored to their rights as States by Congress."⁷³ North

Carolina was to be restored in July 1868 and Lewis would then have to meet his contract. Lewis had been concerned also lest the trustees of the University of Illinois put the rest of their scrip on the market and depress the price. He always believed that the Lunt, Preston and Kean group of Detroit and Chicago were trying to force retail prices down, presumably because they were not only dealers but land investors, and tried to get Ezra Cornell to join him in opposing such actions.⁷⁴ In December 1869 Lewis was to buy 50,080 acres from Illinois at 89 cents, but he came to regret the contract and attempted to secure release from it.⁷⁵

Lewis's only other direct purchase in 1869 was from Delaware which had a grant of 90,000 acres, which he took at 88¾ cents.⁷⁶ In December he bought 101,920 acres from Ezra Cornell at 86 cents, the last of the unlocated and unsold New York scrip.⁷⁷ In 1870 Maine decided to sell 16,320 acres that had not been sold in 1866, and Lewis took it at 84 cents.⁷⁸ The only other scrip to come on the market that year was South Carolina's. State records show that it was sold to John Thompson of New York, at 72½ cents, but whether Thompson was the principal or only an agent, we do not know.⁷⁹ Lewis asserted in a private letter that he

and the Senate on March 26, 1867. *Congressional Globe*, 39 Cong., 2 sess. (1866), 153; 40 Cong., 1 sess. (1867), 347.

⁶⁶ Lewis to Cornell, May 25, 1868. Regional History Collection, Cornell University.

⁶⁷ Illinois Industrial University, *Third Annual Report* (1870), 92. In March 1872 the trustees abandoned the idea of locating any more land themselves and sold the remaining 24,480 acres of scrip at \$1. Lewis was not the buyer, it appears. *Sixth Annual Report* (1873), 112.

⁶⁸ The Delaware transaction is thoroughly documented in the Minutes of the Board of Trustees of Delaware College and in the Evans Papers at the University of Delaware. Lewis was slow in making his payments, but the officers and trustees, seeing no other alternative, went along with him in a way that suggests for him the role of an underwriter rather than purchaser. But Lewis paid interest on his unpaid balances and received the scrip only as fast as he paid for it.

⁶⁹ Halliday, *History of the Agricultural College Land Grant Act*, 30.

⁷⁰ New York Senate Document 103, p. 371-372. The Maine sales were later investigated by a legislative committee. Their report was published at Augusta in 1876 and includes, at page 27, a letter from Ezra Cornell testifying that his dealings with Lewis were "honorable and satisfactory."

⁷¹ H. H. Kimpton to A. J. Ransier, President of the

⁶⁶ *Congressional Globe*, 40 Cong., 1 sess. (1867), 346-347.

⁶⁷ Gleason F. Lewis to Ezra Cornell, June 5, 1868. Regional History Collection, Cornell University.

⁶⁸ U. S. *Statutes at Large*, 15: 227. In 1870 Congress passed an act of grace affirming entries made within thirty days of July 27, 1868. *Ibid.*, 16: 186.

⁶⁹ Act of July 1, 1870, *ibid.*

⁷⁰ Gates, *Wisconsin Pine Lands*, 33, n. 14. In asserting that "previously only speculators could use the scrip," Gates seems to be mistaken.

⁷¹ Andrews, *The Land Grant System*, 47-48; Lewis to Ezra Cornell, April 15, 1868. Regional History Collection, Cornell University.

⁷² *Ibid.*

⁷³ The resolution, introduced by Congressman Julian of Indiana, passed the House on December 17, 1866,

had bought it, but he never included South Carolina in his boastful advertisements, so it seems probable that he did not.⁷⁰

After the South Carolina sale of October 1870, Lewis was the sole buyer of scrip from the states. The northern states had disposed of all of theirs but the remaining states of the former Confederacy were still to receive and offer 1,650,000 acres. Lewis bought all of it.

In April 1871 Louisiana sold him 209,920 acres at 87 cents and about the same time he bought the 180,000 acres issued to Texas at the same price.⁷¹ By June he had to pay 90 cents for the Alabama issue.⁷² In July he secured at the same figure, 209,920 acres issued to Mississippi.⁷³

In evaluating these prices it is helpful to examine the current retail prices at which Lewis was offering scrip. In June 1871 he was offering quarter-section lots at \$1 an acre and lots of 640 acres or more at a trifle less than 97 cents; in August he advanced prices three cents and in September another three. These prices stayed until the active land-entry season of the summer of 1872.⁷⁴ It would seem, therefore, that profits came from volume rather than from a wide spread between costs and proceeds. Lewis's overhead was probably not great, but the difference between cost and sales price was not all profit. It can hardly be over-emphasized that Lewis was a dealer and not a "speculator."

In 1872 Lewis bought Georgia's scrip in January and Arkansas' in August, both at 90 cents, but he had to pay Virginia 95 cents in May for the state's

grant of 300,000 acres.⁷⁵ This was the highest price ever paid a state for college scrip. After the Arkansas purchase there remained only the Florida grant of 89,920 acres, which was sold to Lewis at 90 cents on April 14, 1873.⁷⁶ At that time he was offering retail units of less than 640 acres at \$1.19 and greater quantities at approximately \$1.16 an acre.⁷⁷

In summarizing the diverse experiences of the states in disposing of the college scrip, a few generalizations may be risked. Historians have marveled that the states realized so little from the seeming generosity of the land grants and some have suggested that a ring of land speculators mulcted the states and deprived them of just returns.⁷⁸ A different interpretation of the facts based on a systematic investigation of the records would be that most of the states pursued a short-sighted program within the framework of a dubious federal policy. Even after Illinois had demonstrated that the scrip could be located by state colleges notwithstanding the statutory injunction against entry by the states themselves, the states continued to dump their scrip on the market. Even Illinois, Cornell, and Brown University, the assignee of Rhode Island, abandoned land entry because of pressure to liquidate their land-grant endowments, and sold a large portion of their scrip. The first simple fact is that the states were unwilling to appropriate sufficient funds to get the agricultural colleges started without using income from the investment of proceeds of scrip sales.

Assuming that the states were going to sell their scrip instead of using it to acquire public land for long-term investment, it seems questionable that the real explanation of low proceeds lies in any alleged concert of speculators. The states sold most of their scrip to land-paper dealers and not to

State Senate, February 16, 1871. History Commission of South Carolina, Columbia, Reconstruction Period Collection.

⁷⁰ Lewis to Z. K. Harmon, November 12, 1870. *Report of the evidence and conclusions of the committee to investigate the sale of the Agricultural College scrip, made to the 55th legislature* (Maine) Portland, 1876, p. 27.

⁷¹ New York Senate, *Document* 103, p. 369-371. Andrews, *The Land Grant System*, 48. Because the scrip was improperly signed by the state's Secretary of State instead of the Governor, there was some delay in making it fully negotiable. *Old Soldiers Advocate*, August 1871. The assumption that Lewis bought the Texas scrip rests on his assertion and his knowledgeability about the foregoing technical detail.

⁷² Alabama received 240,000 acres. New York Senate, *Document* 103, 363.

⁷³ *Ibid.*, 373.

⁷⁴ *Old Soldiers Advocate*, June, August, September, 1871.

⁷⁵ Georgia received 269,920 acres. The sale is recorded in the Georgia Executive Minutes for March 30, 1872. Department of Archives and History of the Office of Secretary of State, Atlanta. The Arkansas sale of the entire 150,000 acres was made to Lewis as representing the Ohio Land Company. I have seen no other mention of this company and suspect that it was an unincorporated fiction. Andrews, *The Land Grant System*, 12. Virginia, *Senate Journal, Document* 6 (1873), p. 1-2.

⁷⁶ New York Senate, *Document* 103, p. 365.

⁷⁷ *Old Soldiers Advocate*, April 1873.

⁷⁸ This view is expressed in various writings of Paul W. Gates, notably his *Wisconsin Pine Lands*.

land speculators. The only dealer who seems to have tried to hold prices down was David Preston of Detroit, and he was never a major figure in the business. The biggest dealer, Lewis, and the biggest holder of scrip, Ezra Cornell, were working desperately to keep scrip prices up, not down.

The real explanation is that the states were confronted with a depressed market. The demand for land paper was not big enough to absorb the tremendous volume poured on the market, particularly in 1866 and 1867. Demand was diminished by the operation of the Homestead Act which reduced settlers' need for land paper. The "incongruous land system" worked both ways.⁷⁹ Even

⁷⁹ The quotation is from the title of an article by Paul W. Gates in the *American Historical Review*, 41: 652-681 (July 1936).

as land grants to states and railroads made more difficult the location of attractive homesteads, so did homesteading make it harder to find good land for entry with land paper. Furthermore, the failure of the federal government to offer new land at public sale after the Civil War created a scarcity of the only category of land that could be entered with college scrip before 1870.

The states advertised their auctions of scrip and usually received sealed bids. In the absence of evidence of collusion, and in view of the closeness of bids and the clear evidences of competition in bidding many times, one is forced to the conclusion that the states derived from their scrip exactly what their short-sighted policies entitled them to: the going market value.

THE FARMER IN THE EIGHTEENTH CENTURY ALMANAC

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In recent decades, scholarship has revealed the value of the old farmer's almanac for social and intellectual history. Even a cursory examination of these little books shows how they acted as cultural carriers in the eighteenth century, disseminating knowledge about the new science, the new religion, and the new politics.¹ But since the

almanacs were compiled primarily, if not uniquely, for the farmer, the question arises: what knowledge and what ideas did they convey about the farmer and agriculture? It is to the answer of this obvious but hitherto neglected question that the present paper addresses itself.

carried forward in the almanacs, as this poem from *Weatherwise's Federal Almanack for . . . 1788*, indicates:

Come mighty good folks, priest, parson, and
people
Who worship at home or pray without steeple;
This book, if well read, will teach you all more
Than Martyrs or Saints pretended of yore;
For they at best took care 'of the soul,
This tells how the suns and planets do roll,
And describes, faith exact, as a man could
desire
All the world that's above and the regions of
fire.

The concomitant of such jaunty dismissals of orthodoxy is the appeal to nature—to natural rights and natural law—and to liberty and patriotism. Here Roger More's almanac of 1766 is illustrative, asserting that the rights of Americans, which the English would trample upon, are guaranteed by the Law of Nature. N. W. Lovely has commented upon these matters in his "Notes on New England Almanacs," *New England Quarterly*, 8: 264-277 (June, 1935).

¹ It will suffice to suggest here how characteristic ideas of the period filtered down to the popular level by means of the almanac. The new science was treated as early as 1659, according to R. E. Spillar, Willard Thorpe, T. H. Johnson and H. S. Canby, *Literary History of the United States* (3 vols., New York, 1948), 3: 239-240, in Zechariah Bridgen's almanac, which contained the first explanation of the Copernican system to appear in New England. In his almanac for 1693, Daniel Leeds tells us that the most rational belief is the Copernican proposition that the sun is the center of the solar system, and in 1708 this same Leeds has a poem on the title page of his almanac to "Ticho Bææ" who "rules the Stars above." The Ames and Franklin publications were rich in astronomical and physical exposition, as Chester E. Jorgenson has shown in his "The New Science in the Almanacs of Ames and Franklin," *New England Quarterly*, 8: 555-561 (December, 1935). The attack on monkish superstition and revealed religion, made in the name of progress, science, and reason, also typical of the eighteenth century, was

Quite simply, the answer is that the almanac, a mirror of its time, reflected the American acceptance in the eighteenth century of what I have called elsewhere the freehold concept,³ a notion that became for the American imagination of the nineteenth century a belief that here in our West was the Garden of the World, a fructifying belief that made of the yeoman farmer the archetypal American and advanced the settlement of western lands.⁴ Partly myth and partly fact, the freehold concept rests on holding land in freehold tenure, and includes the propositions that men have a natural right to the land; ownership of it gives them status and a stake in society, as well as social and economic security; agriculture is the most productive form of labor, and it is conducive to moral and physical health; the agrarian way of life stimulates and makes possible individualism and self-reliance; the farmer is the backbone of democracy whom the government must support. This complex of ideas had wide currency among eighteenth century writers; its principal champions were Franklin, Jefferson, and St. Jean de Crèvecoeur. These men, like their contemporaries who shared a belief in the freehold concept, saw in agrarianism a key that would open to them the quality and aspiration of the society about them. Generally speaking, the almanacs accepted the agrarian view of eighteenth century life in America and conveyed it to their readers, thus fulfilling their function as media of popular culture.

Hardly as a matter of an interpretation of society, but simply as a useful practice, the almanacs, one would assume, would be full of practical advice to farmers. This assumption should apply especially to an eighteenth century almanac, published at the dawn of scientific farming when agricultural reformers like Arthur Young and Jared Eliot were beginning to make themselves heard. Curiously enough, such practical materials appeared only sporadically in the almanacs and obviously had no special importance in the editorial scheme. The early Leeds almanac is an illuminating example. In the 1687 issue Daniel Leeds announces that he is a student of agriculture, and he runs a section on "Short Rules in Husbandry." This appears annually, giving informa-

tion on such matters as the dates of sowing and harvesting and the making of cider. But the section is omitted in 1694, and from that date to the end of the almanac's career in the early eighteenth century there are only scattered references to farming. The student of agriculture had turned to other interests. Leeds is more typical in this respect than Richard Saunders' *Poor Richard Improved*, which published advice in virtually every issue after 1762 on such subjects as preventing smut, raising silkworms, increasing corn crops, or cultivating vines for wine. One would guess that pragmatic American editors and readers alike would welcome such aids to improvement, but the evidence in the majority of the almanacs does not support such a conclusion. Strangely enough, in this area the almanacs seem to have disregarded an opportunity to interest and serve the farmer.

Apparently, however, the almanac editor felt his reader would be interested in pastoral poetry, for he published an inordinate amount of it. It is a paradoxical comment on the American mind of the period that the almanacs should have neglected the practical aspects of farming in favor of verse celebrating rural harvests and rural pleasures. This poetry, I think it fair to say, constitutes an indirect eulogy of the farmer. It is a means of assuring him of his own importance and good fortune and of the valuable role he plays in society. These appear to me to have been the self-consciously agrarian motives of the almanac makers in using pastoral verse. Furthermore, such verse incorporated several typically agrarian themes. Primitivism is one of the fundamental assumptions in these pastorals, as it is in all agrarianism. The poets insisted on singing of the rustic youth "brown with meridian toil,/Healthful and strong";⁵ or on pointing out the virtues of sweating in the field while making hay.⁶ They enumerated the pleasures of country life, "void of care" where "Woods, and op'ning Fields,/With purling Streams to harmless Joys invite";⁷ rural pastimes are invariably innocent. Another theme is domestic felicity which distinguishes the countryman from the great men

³ *Bickerstaff's Boston Almanack for . . . 1775* (Boston, n.d.), 13. Almanac makers wrote little of the verse they printed. Wherever possible, I have identified the American author.

⁴ Thomas More, *The American Country Almanack for . . . 1781* (New York, n.d.), B2^r.

⁵ [Nehemiah Strong], *Stafford's Almanac for . . . 1786* (New Haven, n.d.), B2^r-C1^r.

³ "The Freehold Concept in Eighteenth-Century American Letters," *The William and Mary Quarterly*, 3rd ser., 4: 42-59 (January, 1947).

⁴ See Henry Nash Smith, *Virgin Land* (Cambridge, Mass., 1950), Chap. 11.

whose minds are filled with "anxious Pain":

The Farmer in his Cot enjoys more Bliss,
With's little Children climbing for a Kiss.⁷

Of course the idyllic note is frequently sounded; here it is in a poem of provincial pride celebrating the development of New England.

From Savage Deserts rise our green Retreats

Great Britain's Glory buds and blossoms here:
Ye Gods in Rome, what have ye more to do?
Elysium in New England waits for you.⁸

The final paragraph, in a kind of prose poem on "Spring," published in 1799, summarizes the whole pastoral spirit in associating agricultural life with the golden age that must have existed before the fall of man.

The industrious tiller of the ground now rises to behold the beauties of the morn—to breathe the fragrance of nature, and to be entertained by the airy choirs, which, in animated strains, sing their morning hymns. With the enlivening sun he begins his pleasing task—unwrecked with care, and unperplexed with doubt, he joins his simple song to the varied music of the day. Let none consider the culture of the ground as an ignoble employment: It was the business originally assigned to man: It was his business, and his pleasure, when all his passions were harmonious, and every wish was innocent.⁹

Most often encountered in the pastoral verse is the cornucopia theme, which displays an intense preoccupation with the abundance of the crops. Not only is there a constant reiteration of the idea of plenty, but also this theme is presented to the

almost inevitable accompaniment of the chuckling sense of triumph that signalizes man's victory over nature. The great enemy is winter, for it brings the possibility of freezing and starving. The desideratum is security: warmth and sufficient food. The pastoral is not only an expression of exultation but a paean to the farmer whose success in the art of cultivation has forced the fear of want farther and farther into the distance. The farmer becomes in this context the founder and carrier of civilization; Prometheus joins hands with Ceres. The importance of these pastoral themes for America lies in the fact that the conflict described was intensely felt in America, a relatively new country, and the significant role of the farmer in it was immediately discernible.

These considerations, then, lend an authoritative ring of conviction to the poet's statement that there is no "greater heaven on earth" than watching the last load of the harvest come home.¹⁰ They give us real sympathy with the satisfaction of the full barn:

Now Ceres crowns the barns with plenty;
Joyful farmers view their store:
Be happy men, let this content ye,
Nor dread the winter [storms] no more.¹¹

The same sentiment is found in "The Joys of Harvest," which tells how the damsels and swains celebrate the end of their harvest toils with a dance.¹² The swain, as if carried away in some pagan rite, always turns his eyes in rapture toward the harvest,¹³ the reward that crowns all his toil.¹⁴

When we turn to other aspects of agrarianism in

⁷ Nathaniel Ames, *Almanac for . . . 1747* (Boston, n.d.), 5. Compare this prose passage from R. B. Thomas, *The Farmer's Almanack for 1797* (Boston, n.d.), C2:

"'Tis with the greatest pleasure that I at this season visit the industrious husbandman's house; if it happen to be in the evening, I find him surrounded by his family, before a smiling fire side and a clean hearth, each of the females . . . busily employed with sewing or knitting, while he is amusing himself, and entertaining them by reading some useful and entertaining book. He is happy in the enjoyment of Heaven's bounties, and wishes to make all around him so." This is strongly reminiscent of scenes in Crèvecoeur and in Enos Hitchcock's *The Farmer's Friend*, an agrarian homily of the 1790's.

⁸ Ames, *Almanac for . . . 1740*, [p. 14].

⁹ Abraham Shoemaker, *The United States Almanac for . . . 1799* (Elizabethtown, n.d.), B1.

¹⁰ Samuel Stearns, *The North American's Almanack for . . . 1777* (Worcester, n.d.), B3.

¹¹ Shoemaker, *The United States Almanac for . . . 1800* (Elizabethtown, n.d.), C4.

¹² Bickerstaff's *Boston Almanack for . . . 1785* (Boston, n.d.), [pp. 17-18].

¹³ Nathaniel Low, *An Astronomical Diary . . . for . . . 1792* (Boston, 1792), B1. I have paraphrased lines from a sustained pastoral poem which also appears in Daboll's *New England Almanac . . . for . . . 1800* (New London, 1800), [p. 9].

¹⁴ Ames, 1769, vii. Additional indication of the popularity of pastoral verse is to be found in the magazines of the period where such poetry appeared with great frequency under such titles as "The Harvest," "The Close of Harvest," and so on. See, for example, the *Massachusetts Magazine*, 4: 457 (July, 1792), 637 (Oct., 1792); 7: 379 (Sept., 1795); and *Rural Magazine*, 1: n.p. (July 28, 1798).

the almanacs, we find some support for the foregoing view of the pastorals. Agriculture is regarded as the basis for all society and the source of all progress, and it is the one indispensable industry. No almanacs I have examined contradict this view. Although not all almanacs are concerned with these matters, many of them contain relevant evidence; a sampling will reveal the general pattern. Note then, this couplet which Eben W. Judd used:

HAIL agriculture! by whose parent aid,
The deep foundations of our states are laid. . . .¹⁵

In 1786 Judd had published a brief essay, "Agriculture," which touched upon many of the most significant aspects of the freehold concept:

Nothing can more fully prove the ingratitude of mankind (a crime often charged upon them, and often denied) than the little regard which the disposers of honorary rewards have paid to *Agriculture*; which is treated as a subject so remote from common life, by all those who do not immediately hold the plough, or give fodder to the ox, that there is room to question, whether a great part of mankind has yet been informed that life is sustained by the fruits of the earth.

Agriculture not only gives riches to a nation, but the only riches we can call our own, and of which we need not fear either deprivation or diminution.

Of nations, as of individuals, the first blessing is independence. Neither the man nor the people can be happy, to whom any human power can deny the necessities, or conveniences of life. There is no way of living without foreign assistance, but by the product of our own land improved by our own labour. Every other source of plenty is perishable or casual.¹⁶

Here the central position of agriculture in the national life and in the economy is affirmed by arguments similar to those used by the Physiocrats in France. Another Physiocratic notion—that agriculture is the only source of wealth—is also suggested. The democratic ideas of political and economic independence are linked to agriculture, while the traditional atomistic and isolationist attitude, which has since the eighteenth century been associated with agricultural areas in this country, also emerges in this passage.

Nathaniel Ames, maker of perhaps the most

distinguished almanac of his time, also devoted thought to agrarianism. In 1761 he printed this Physiocratic aphorism: "Husbandry is the Philosopher's Stone which turns Trees, Fruits, Earth, Iron & Water into Gold."¹⁷ A few years later in the introductory paragraph to a discussion of the use of marl as a fertilizer, Ames underlines some of the ideas Judd had used. "... the Kingdoms of the Earth, and the Glory of the World will be transplanted into AMERICA: But the Study and Practice of Agriculture must go Hand in Hand with our Increase. . . ." R. B. Thomas, who issued *The Farmer's Almanack*, displayed more consistent interest in the freehold concept than any other almanac maker of the century. He too should be heard on this score: "The cultivation of the earth . . . [is] the most useful and necessary employment in life." Agriculture is "the art which supports, supplies, and maintains all the rest."¹⁸ And Richard Saunders developed all these ideas in an essay "On Husbandry," preceded by this quatrain:

To render service, and perfection give
To this great Art, by which all others live:
To twine the laurel round the farmer's brow,
And learn to use—to venerate the PLOUGH.

No employment is more beneficial than agriculture, Saunders tells us. Poets have celebrated it; the leaders of antiquity have followed it. He relates the story of Cincinnatus and exalts Washington as the modern counterpart. Furthermore, husbandry is advantageous because it converts a barren desert into an area of "smiling meads, fertile fields, and numerous flocks and herds." We cannot praise too highly, Saunders concludes, those enterprising farmers who, blest with liberty, brought civilization to this country and set it on the road to glory.¹⁹

Many of these grandiose generalizations about the role of agriculture in society reveal the spirit of agrarian nationalism that was widespread in America; it is this manifestation of the freehold concept that we may now specifically consider.

¹⁷ Quoted in Samuel Briggs, *The Essays, Humor and Poems of Nathaniel Ames, Father and Son . . . from the Almanacks* (Cleveland, 1891), 319.

¹⁸ Ames, *Almanac for . . . 1764*, [p. 22]. The passage was reprinted in Thomas, *The Farmer's Almanack . . . 1789*.

¹⁹ Thomas, *The Farmer's Almanack . . . 1786* (Boston, [1795]), E3^r.

²⁰ Richard Saunders, *Poor Richard Improved . . . 1800* (Philadelphia, [1799]), F1^r.

¹⁵ Webster's *Calendar . . . for . . . 1790* (Albany, n.d.), [p. 20]. The lines are from David Humphreys' "On the Happiness of America," a nationalistic poem with strong agrarian overtones.

¹⁶ *The United States Almanack for . . . 1786* (New York, n.d.), E1^r.

Patriotic pride could be readily expressed in agricultural terms, since two factors, the availability of land and farming under freehold tenure, gave attractive opportunity to those who were denied it in Europe. Furthermore, the social and political tone of colonial, and later democratic, America was conducive to a more independent and free rural life than could be enjoyed anywhere else. In fact, that freehold tenure which evokes so much praise from Americans and visiting foreigners alike seems to have nourished those qualities of independence, individualism, and love of freedom which constitute the democratic manner and were eventually written into the democratic dogma.

Early expressions of agrarian nationalism appear in the almanacs before one can legitimately talk about American nationalism, but they reflect even well before the Revolution a consciousness of the differences between America and Europe that indicates a conviction of the superiority of American place and custom. In his *Almanack for . . . 1693*, Daniel Leeds has a few lines voicing the confident hope that the produce of American farms will not be the victim of those twins of Old World tyranny, the church and the military.

Winter we now forget, green Grass we see,
In Woods and Fields, and Leaves on every Tree.
The Planters Hopes nor thrifty Husbands Tillage
Becomes not here the Priest nor Souldiers Pillage.²¹

Fifty years later Titan Leeds glories in the freedom from oppression that marks the American farmer who is happy because bounteous Providence allows him "With his own hands Paternal Grounds to Plow"; he is secure from the "Cheats of Law," "Nor does [he] the Affronts of Palaces endure."²² In a poem "On Publick Spirit" that runs throughout the 1752 issue of *Poor Richard Improved*, Franklin predicts that America will develop into a great country. Contributing to its growth will be those "Sons of Mis'ry" from Europe who come here to populate the land and enjoy its blessings, where

Allotted Acres (no reluctant Soil)
Shall prompt their Industry and pay their Toil.²³

Characteristic of agrarian nationalism is the open invitation to share the bounty of a fruitful earth

²¹ Daniel Leeds, *Almanack for . . . 1693*, [p. 14].

²² Titan Leeds, *The American Almanack . . . for 1743* (New York, 1743), [p. 9].

²³ *Poor Richard Improved . . . 1752* (Philadelphia, n.d.).

and a desire to impugn the social institutions of Europe as they affect the agricultural classes. Thus Judd quotes David Humphreys, who tells us that love of independence prompts the European pilgrim to labor in the soil; having escaped "vassall'd woes," he will find a quiet farm home here.²⁴ It was obvious that the freehold was superior to serfdom.

For the freehold meant independence, which was another source of nationalistic pride and also a positive good in itself. The almanac makers recognized that the farmer embodied more completely than any other class of citizens in the New World the democratic virtues of independence and equality, and that he loved liberty and was able to live more freely than others. "The Contented Farmer" in Ames' *Almanac for 1761* says,

I eat, drink, and sleep, and do what I please,
The King in his Palace can only do these.²⁵

This freedom and this rather aggressive egalitarianism are hallmarks of the freehold concept. The farm was recognized in explicit terms as a source of "independence and affluence" by Richard Saunders.²⁶ The same author published a vigorous and a self-conscious agrarian statement on liberty in his *Poor Richard Improved . . . 1771*:

Who'd know the Sweets of Liberty?
'Tis to climb the Mountain's Brow,
Thence to discern rough Industry,
At the Harrow or the Plough;
'Tis where my Sons their Crops have sown,
Calling the Harvest all their own,
'Tis where the Heart to Truth allied,
Never felt unmanly Fear;
'Tis where the Eye, with milder Pri'e,
Nobly sheds sweet Pity's Tear,
Such as AMERICA yet shall see,
These are the sweets of Liberty.²⁷

Much earlier Franklin had praised the farmer's lot in a poem called, appropriately, "The Farmer."

²⁴ *Webster's Calendar . . . for . . . 1790* (Albany, n.d.), [p. 24]. The lines I have paraphrased are from "On the Happiness of America."

²⁵ Briggs, *Nathaniel Ames*, 318.

²⁶ *Poor Richard Improved . . . 1789* (Philadelphia, [1788]), D1^r.

²⁷ (Philadelphia, [1770]), A3^r and A4^r. In the 1769 almanac, Saunders has a poem on the plough which speaks of colonists as "generous Britons"; the shift in emphasis to America and liberty in the lines above has an obvious significance.

O happy he! happiest of mortal Men!
Who far remov'd from Slavery, as from Pride,
Fears no Man's Frown, nor cringing waits to catch
The gracious Nothing of a great Man's Nod;

Tempted nor with the Pride nor Pomp of Power,
Nor Pageants of Ambition, nor the Mines
Of grasping Av'rice, nor the poison'd Sweets
Of pamper'd Luxury, he plants his Foot
With Firmness on his old paternal Fields,
And stands unshaken.²⁹

The dignity of man, in which Franklin takes a justifiable pride, is guaranteed by the security of the freehold.

Full ownership of the paternal fields was ever a theme emphasized and enjoyed by Americans who cherished their liberties. Land was always available in America; after the French and Indian war, Ames thought, it might be had for nothing in some areas. Free land offered the farmer wonderful opportunity but just as important was the nature of the tenure: "We hold our Lands under no other Lord but He who gave the Land of Canaan to Abraham. . . ."³⁰ In a long address to the husbandmen of America, written a few years later, Ames is discussing the practical aspects of farming; he points out that we must raise crops for export in order to increase our wealth. "We are not tenants but *lords* of the soil, and may live as genteel, tho' not in such splendour,

as lords . . ." by increasing our trade, diligence, and industry.³⁰

These prideful sentiments have an obvious corollary: the independent farmer should be the master of his political destiny. Ames asserts the responsibility of the farmer to participate in government, and suggests that he become, in a sense, a politician.³¹ But strangely enough, he is alone in this opinion. Other almanacs feel that the farmer should stick to his plough. This is a significant deviation from the general pattern of eighteenth century agrarianism in the almanacs. It should be added that the only other idea in the freehold concept that does not appear is the notion that men have a natural right to the land.

These two deficiencies in the almanac's total coverage of the freehold concept are in reality the exceptions that prove the validity of the thesis here, namely, that the almanac reflected the American acceptance of the concept. For while it is indeed curious that there was not a more vigorous and original contribution to agrarian thought in the almanacs, it is nevertheless clear that the bulk of the propositions that make up the freehold concept were cordially received and advanced by almanac makers. Their championship of this concept reveals them as spokesmen for the farmer and prophet of the agricultural wealth and destiny of our nation.

²⁹ *Poor Richard Improved . . . 1755* (Philadelphia, n.d.), [pp. 5-9].

³⁰ Ames, *Almanac for . . . 1765* (Boston, n.d.), [p. 23].

³¹ Ames, *Almanac for . . . 1767* (Boston, n.d.), [p. 2].

³² *Ibid.*, [pp. 1-2].

THE ALBERTA WET CYCLE OF 1899-1903: A CLIMATIC INTERLUDE

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In an earlier paper on the beginnings of agricultural history in Western Canada, reference was made to a supposed cycle of ultra-dry seasons in the central areas of the Province of Alberta, between 1890 and 1898. It is not altogether clear by just what criteria respecting rainfall these years were pronounced to be 'dry'.¹ The region in which

the present writer's parents—and he himself—settled in July, 1894, was in the very heart of what should have been the affected territory. This was in the Red Deer Canyon—Lacombe district, on the eastern side of the Calgary and Edmonton Trail and the closely-flanking branch of the Canadian Pacific Railway between the two points named.

¹ I am unaware just what meteorological data were recorded prior to the establishment of Alberta as a Province in 1905. The only Dominion Experimental Farm for the old North West Territories was at Indian Head, Saskatchewan. They certainly kept such records,

1888 seq. The Mounted Police posts may have done so (1874 seq.). If so, these will be in the N. W. Mounted Police, *Annual Reports* (Ottawa). I kept a working diary, including weather jottings without instruments, for several years.

Its characteristic ecology extended for a considerable distance eastward, and correspondingly westward toward the Rocky Mountains foothill country. Certainly during the latter half of the period 1890-98 no such dry period occurred in this particular belt. What did occur, however, in the years indicated by my title was a most pronounced and excessively wet cycle.

Sixty years and more ago the climate of this northern scrubland-and-timber region was regarded as being very uniform and dependable. Any variations of which one heard were apparently confined to the *winters*, and consequently caused little concern from a farmer's point of view. This or that winter was a 'light' or a 'heavy' one. Snowfall ranged from almost none at all to unbroken depths of 4 or even 6 feet. But it appeared to be taken for granted that such wide variations simply could not occur in the summer.

During the years 1894-98 this accepted uniformity seemed reasonably well justified by events. At that time the 'June rains' were and apparently had long been a proverb. It had come to be a farmer's *cliché*: 'Get off the land by the Twenty-Fourth of May or you're likely to be drowned off!' There was another similar catchword: 'No rain after the Twenty-Fifth of August!' This latter was something of a 'delphic' *double entendre*. What the propagandists and 'boosters' liked was for newcomers to interpret this as signifying a dry fall for harvest operations. What it actually meant—as we learned later from resident-cynics and from our own experience—was that from that date onward any downfall was likely to be *snow*.

Such fluctuations in weather as occurred in our locality down to and including 1898 were very mild, and in no way seriously challenged the general 'uniformity.' Every Saturday in August, 1895, was wet; so was every Tuesday in June 1896; and every Monday in June, 1897. In 1895, growth was very rank and heavy on new land which at that time comprised the great majority of the areas under cultivation. In the Lacombe district few crops ripened sufficiently to thresh. It was said at the time that one outfit threshed everything east of Lacombe over an area some 12 by 20 miles square.

The 1896 season was marred by a most disastrous frost on July 21; 'too soon and too late,' that is, too soon for anything to be matured and too late for it to recover. There was less rainfall in 1896 than in 1895; but 1897 was an ideal season in every respect. We had rainfall in abundance, and neither frost,

hail, nor high winds; and the harvest season was dry. Usually, also, if rain is abundant in Alberta at the right time (May 31-July 31), it does not come at the wrong time. In bad years the seasons are frequently reversed; a dry June is followed by a wet harvest time.²

The 1898 season was rather drier than 1897, but not sufficiently so to constitute a positively 'dry season', although relatively so in our own local estimation. I recollect a new neighbor who had 'trailed it in' the previous year, after many years' residence in Iowa, Kansas, Colorado, and Nebraska saying to me that fall, that he had begun to think "them crops never was a-goin' to ripen. . . !" This illustrates the purely relative interpretation of a 'dry' season. What we considered rather faster than ordinary seemed to him rather slow. It is, of course, Alberta's normally slow ripening season which produces the enormous weights so frequently recorded: 66-pound wheat, and oats of 50 pounds and even more, per measured bushel.

The early summer of 1899 gave no indication of any imminent likelihood of material change in these conditions. There was an abundance of rain in the growing season and no lack of warm weather. In Alberta 'a sloppy June' is the best promise of a good harvest, and everything pointed to a prosperous year. About August 15, however, just when further downfall could only be an evil, we had several drenching deluges, coming off and on for more than a week, causing the rank and heavy growth of a luxuriant summer to lodge and grow yet more. This was followed on August 25 by a rather heavy fall of snow. The snow did not remain long, but it flattened every field in northern (what is now termed central) Alberta which was not previously cut. Probably less than 10 per cent of the crop had been cut before the snowfall; such cases being old fields on high and dry locations. The remainder had to be cut one way.

The months of September and October were a dreary succession of rains, broken only by just enough fine days to delude us with false hopes. As the fall drew on the rains became colder with occasional snow, and were punctuated with frosts. My own promising crop was reduced over 50 per cent in yield and in quality. The crops were largely 'frozen ripe.' Only the ripest grains near the top of the heads survived the frosts. As we later dis-

² June was a dry month in Northern Alberta generally in 1916, 1919, 1922, 1924, 1926, 1929, 1937, 1939, 1941, and the first half of the month in 1942.

covered, the sample could not be relied upon for seed. What would in ordinary conditions be the fundamental criterion of quality for seed oats—the perfect ripeness of the sample—"not a speck of green showing"—became our standard of rejection for seed purposes. 'Green tips' among the sample were our only safe guarantee that it had not been frozen ripe. No amount of argument concerning alleged dates of cutting, weight, plumpness, above all ripeness, moved us in the least. In most instances, apart from one or two notorious individuals, we imputed no deliberate bad faith. We simply could not afford to take any chances.

The seasons of 1900, 1901, 1902, and 1903 were a succession of similar conditions. The heavy, incessantly wet period commenced a month or more earlier each year. The soil was so utterly saturated that in winter the country became a solid block of ice 6 or 7 feet thick through which no evaporation was possible; and with summer the deluges came again. What had been dry, wild hay meadows or sloughs from which—apart in some instances from the very center—we had obtained our hay, became lakes. I myself learned to swim in 1901 in the center of a former saucer-shaped hay slough in a deep pass which had become a lake 8 feet deep in the middle. We ourselves had cut hay in this precise spot in 1897-98; and so firm was the surface everywhere that we hauled it out in full loads from any part of the slough where we chanced to load our final haycock. During these years when the low sloughs were full, by way of compensation, we got our hay from higher stretches of wild upland which previously did not yield grass long enough to pay for cutting.

During the months of June, July, and August 1900, we had scarcely a cloudy morning or a dry afternoon or night. This is a common Western summer phenomenon for short periods of a week or so, but the sky commonly clears before dark. At this time those places where the winds could not penetrate were stifling and steamy like a great forcing-bed. The woodlands gave forth that peculiarly fetid and unwholesome exhalation from rotting vegetable growth which is more commonly associated with tropical lands. An old friend of mine who dwelt near the swampy edge of one of these foul-steaming woodland belts fell grievously sick this summer, very narrowly escaping death. His doctor, a very competent man well known in the earlier medical history of the Province, Dr. W. J. Simpson, then of Lacombe, told us that preposterous as it might seem in such a latitude

and altitude (about 2750 feet), he could give it no other name than malaria. Had he encountered it in a more southerly region he would have diagnosed it as such without a moment's hesitation.³

The same old friend's son and myself put up a mile of rail fence on a joint line that summer. This included a long stretch through a former hay slough, now a lake over 3 feet deep. There were no homes near except a couple of bachelor-shacks, and no main trails. We stripped down to shoes and straw hats while at work in this central portion, well-nigh waist-deep. Carrying—and not losing—hammers and spikes was a problem; and if we lost our hold in fishing up a half-submerged and very slippery rail we were drenched from head to foot! Hence our nudist procedure. In 1903 a number of us did the same while fencing a huge area on one of the Burns and Company ranches near Calgary where the water-passage was longer and deeper. This was a barbed wire fence, and driving staples meant a shower bath. The bottom wire had to be postponed until drier times.

In this year 1900 crop-growth was again extraordinarily luxuriant. I sowed a small field of barley on the first Friday in June. There was a thunderstorm the same night, followed by 3 of the June days mentioned above. On Tuesday morning my barley was up! I have never seen another instance quite so rapid. Once again, however, only the hilltops or some fields not too rich ripened their crops properly. This made harvesting very late and difficult again; and on September 23 we had a tremendous storm with some 2 feet of snow. This remained unbroken over the country, with enormous icicles hanging from the eaves, until October 12-13, when a strong Chinook wind took it off. During this period we went around on sleighs perforce, precisely as in winter. This year almost every crop in the country was cut one way only; with the same consequences concerning seed grain as in 1899. We were struggling with the harvest, such as it was, until well along into December.

The same causes in 1901, incessant rains and a consequently rank and uncontrollable growth, contributed once more to lodge and 'layer' our grain crops. This delayed ripening, and again we had snow, on September 7. For the third consecutive year almost all the crops in the country were cut one way. Cutting the grain after a snow was not in

³ The not uncommon 'mountain fever' of the Rockies, often troublesome to a newcomer, has been classed as 'typho-malarial.'

itself so difficult as when it was lodged by winds from various directions. The weight of snow came uniformly from the north. When it dried off, which partially lifted the crop, the grain could be picked up by the binder as cleanly as by going around the field in the normal manner. But unless the field lay in a long stretch north and south it was a tedious job! Unfortunately, too, as the snow ceased the sky cleared; and in mid-September that inevitably brought frost. Our grain was again poor in quality and yield, and utterly untrustworthy for seed.

By this time the effect of these seasons was noticeable on any but the highest of high and dry lands. Many of the level field areas were completely unworkable. On my own sloping hillside farm, the tiniest of slight undulating depressions, negligible when they were broken and in fact until the virgin sod had thoroughly disintegrated, were now boggy runlets in which the water could be seen to collect. By 1902 the lower two-thirds of what had been an uninterrupted 80-rod furrow, required to be plowed, harrowed, and sown in a checker-board series of small rounded patches of an acre or so, and the endless turning about on such short furrows wasted much precious time. The 'reclaiming' of these winding strips of intervening 'runlet' in the following years was a problem in itself. The uncultivated soil fostered the invasion of grasses which in their turn toughened and semi-sodded the land again. I had no satisfaction with that field until it became practicable to summer-fallow it. Manuring and summer cultivation finally restored soil to me once again.

The factor which I have mentioned, of the rains coming earlier each year, made 1902 additionally difficult. For even in seeding time this year the rains were upon us. This made ploughing—and even more noticeably—harrowing—in that saturated land very hard on both man and beast; the job, when done, was unsatisfactory. I think water-levels reached their maximum height this year. But at harvest time we were at least able to go round our fields in so far as snow was concerned, although the quality of crops was again poor.

The 1903 season would perhaps not have been classed in itself as a super-wet year. The rainfall, while more than sufficient, was hardly excessive; perhaps no heavier than 1899 or even 1895 in the north. Water levels were beginning to fall perceptibly; our swimming-hole was down to about 4 feet. But the country as a whole was so thoroughly charged and saturated with moisture that the region was like a gigantic swamp. An amount of

rain which on an ordinary summer surface would have been absorbed without difficulty now served to delay materially the recovery of the ground from its spongy condition. Very much by reason of this, I should judge, growth was still very rank and prolonged. Consequently, although we had no fall snowstorm and were again able to cut all around our fields, the sample was not entirely satisfactory. The complete freedom from snow or early fall frost did, however, remove our fears about the use of our own seed without a previous test. That was a distinct gain.

By 1904 it really seemed as though the abnormal precipitation, coming earlier each year, had worked itself so far forward in the calendar that it came as snow instead of rain. We had virtually no winter until the end of January, 1904. A light sleigh could be taken to town by keeping to the side of the main roads, but a load could go only on wheels. A hayrack on sleighs could be hauled over the stubble which held the snow for a load of straw or the like. But bob-sleighs could not be used in the woods.

On Sunday night, January 31, I reached home just before midnight, having driven the family into Lacombe to church. Soft snow began to fall as I was stabling my horses. It snowed steadily and heavily until Wednesday afternoon, February 3. Fully 4 feet must have fallen. The sky cleared and the weather turned bitterly cold. Almost the whole of February and March was one prolonged cold spell, unusual in the latter month. This was accompanied by almost incessant drifting storms. About mid-day on March 29, I froze my face severely.⁴ With the coming of April the snow disappeared and we experienced a more normal, and a splendid, season. The wet cycle was over.

Some idea of the utterly abnormal character of those wet summers may be conveyed when I say that during the four seasons, 1900-03 inclusive, we had no mosquitoes. Should the reader feel incredulous concerning this, I may refer once again to our nudist fencing operations. Whatever the discomfort of wet shirts might have been, it would obviously have been impossible to work stark naked in any ordinarily pest-haunted Alberta summer. The curious thing is that the waters were warm, as may be imagined from our working in them for hours together, the very condition re-

⁴This was my latest date for such an experience until 1920, when I froze my face in Edmonton, April 4, 5, but at sunrise.

quired for hatching out the 'jiggers.' But the water must also be stagnant for those creatures. The incessant rains in the height of 'fly-time' kept the water perpetually fresh. It was also kept constantly in motion by the prairie breezes blowing over those wide and open expanses. These conditions must have made the waters unfavorable for breeding.

During those wet years we required no smudges for our milking cows. In 1904, we had big 3-year-old steers, born during this immune period, that did not know the use of a smudge. When the mosquitoes returned and we had to light smudges once again, the older cows remembered them at once and moved over towards the smoke. For a night or two the steers wandered to-and-fro through the scrub, bellowing their misery and disgust, until they also discovered the secret. We never enjoyed such an immunity again.

The effect of these wet seasons upon such roads as we had was appalling. What made conditions so unspeakably hard was that the country was by this time beginning to fill up. Our early trails had been mainly good, as trails commonly are when teamsters can go where they please. They followed the ridge-contours, which were dry and firm, and the teams could face the occasional crossings and soft spots in a relatively fresh condition. We were forced by the fencing-up of these to follow the road allowances; yet nothing whatever had thus far been done to drain or improve them.

Those straight roads which may look impressive on a map were in countless cases sheer topographical impossibilities. In our deep, soft, black-soil territory they were the most insane demonstration of bureaucratic theorizing one could well imagine. Roads leading north and south occurred every mile; those leading east and west were every 2 miles. By some law of contraries, it frequently seemed to be the case that the 'blind line' followed a thoroughly suitable natural contour, needing nothing but traffic to make a smooth road; while the alternate road allowance led along the very center of some utterly impassable and unimprovable gully 'soft enough to mire a saddle-blanket.' Even in the much drier southern Alberta, it proved necessary again and again to abandon the road allowances and to survey contour-routes precisely on the principles of the earlier trails. The Federal Government at Ottawa expropriated the necessary land and restored the road allowance acreages to the adjoining owners.

We were 11 miles from our local small town at

Lacombe. If we had a load to haul each way in summer, we were compelled to remain in town overnight. Our horses could not stand up to the double trip in one day. Freeze-up and the coming snow—the bane of our ordinary years—were joyously welcomed. The frozen quagmires were enough to shake wagons, men, and horses to pieces until the snow buried them, but at least we knew we could stay on top!

These terrible years were marked by a widespread mortality among the horses. Probably thousands perished. This was known as swamp fever, being in fact gleet, in many cases developing into glanders. This disease was popularly—and no doubt correctly—believed to be traceable to the foul, fetid miasmas I have described as being prevalent in the woodlands, whence the local name. The cleansing agency of prairie fires was an impossibility in those years. The rank and irrepressible growth of the vegetation hindered the sun from drying the surface even between rains. The pestilential muskeg and forest areas extended their bounds immensely, and must have greatly increased the volume of poisonous air with which the atmosphere was permeated.

This plague did not affect the cattle in any way. It was much less severe with the hardy native Western horses which were accustomed to running loose throughout the year, although they were by no means totally immune. But the death-toll was terrific among the imported horses. Countless cases occurred of magnificent teams being brought in by settlers from Ontario and the U.S. Middle West. Many had probably never spent a night in the open before. They were unloaded from the immigrant's railroad car and were started out at once on a 50-mile haul with a heavy load through—not *over*!—unimaginable roads. Very frequently they had to spend their night on a picket-rope in pouring rain, or in a sod-roofed stable with water dripping on their backs as they stood. Despite their enormous superiority in weight and initial strength over the average general purpose prairie horses of 1200 to 1300 pounds, their slow gait rendered a solid road essential. They were noticed again and again to mire in muskegs where a team of 'cayuses' little more than half their weight would take a similar load across.

So much of this unavoidable abuse befell them at the precise time when strange food and strange water—to say nothing of the additional hardships of the road—demanded a period of extra-careful nursing. Many newcomers with highly valuable

horses were badly crippled by the total loss of their horse-power. I knew more than one settler who in respect of breed and quality never recovered from these blows. We ourselves were reduced to one gelding, from which condition it took some time to make a satisfactory start once more. Except in those instances where the Dominion veterinary surgeon had condemned a horse, in which case the owner received two-thirds the estimated value, there was no compensation for its loss. During this era, there was no inspection. The familiar symptoms—the listless eye, running nose, cough, and general hang-dog air of feebleness, were too common to attract notice, and far too common to incite an informer to any hopes of gain by reporting the case to the Mounted Police. Without some such ‘information received,’ no official examination of livestock ever apparently took place.

Even the normally much drier areas of southern Alberta were affected by the wet cycle. During the years 1896-98, I frequently rode over an old abandoned farm some 5 miles south of Calgary along the Macleod Trail. It had manifestly lain neglected for years, for even in that dry air the old log buildings on the place were utterly decayed. The land itself was blown out below the surrounding prairie levels for the plowing-depth of 4 inches or so, down to the hard untouched subsoil. It had grown no semblance of a sod and then bore nothing but scattered clumps of wild sage and an occasional tuft of bunch grass. In 1902, purely as a result of wet seasons and not of irrigation (as I show below), this old field bore a crop of timothy 4 feet high and correspondingly thick on the ground, which I myself saw.

It was the same wet cycle which brought about settlement of the southern territory at large, prior to the great irrigation projects. On August 24, 1898, I hiked afoot from Innisfail to Sam Troyer's on the Lower Rosebud Creek (the well-known stopping-house and former stage station, ‘Chamberlain's’), a distance of 35 miles, without a single drink.⁶ The next day I hiked from Troyer's to Calgary, another 35 miles, with two drinks. One was from a railroad ditch; the water had color, consistency, and almost the temperature—but by no means the flavor—of pea soup. The other was from an old ‘Stony’ (Assiniboine) grandma, one of a party I met near ‘The Buttes,’ south of Airdrie,

whose generous response to the thirsty stranger I have never forgotten.

There were then 5 houses, 2 of them adjoining, between the abandoned, pre-railway stage-station at the ‘Lone Pine’ to Calgary, a distance of 60 miles. At these places the wells and ropes were locked up while the owners were absent haymaking. There was some water visible in deep narrow pot-holes in both the Rosebud Creeks; but neither man nor beast could have reached it without a rope and a ‘billy-can.’ To put one's mouth down would probably have meant to slide in headlong and suffocate in that position. I got a smooth pebble to put in my mouth, but no drink. Next year Rosebud Creek was flooded out.

In 1897 a small local irrigation company commenced business in the Calgary district.⁷ In that year I worked on a farm irrigated by them. The farm was occupied by a well-known Westerner, C. W. Peterson, afterwards long the editor of the *Farm and Ranch Review* of Calgary. The company gates and ditches were washed out in these incessant rains. The double misfortune, each one fatal in itself, of the farmers having no need to buy water and the company having none to sell, forced the company out of business. In 1902, I saw where their intake from the Elbow River crossed the Elbow River trail, some 20 miles west of the city of Calgary. The ditch ran through a rancher's home paddock. Under the original fence, to which a few fragments of an irrigation gate still clung, a man on horseback could have ridden clear of the bottom wire without bending his head. A huge patch of fencing had had to be built up to close the gap.

On the same trip we saw herds of range horses and colts gone wild. Nobody could run down or corral them in the spongy condition of the foothill valleys. The cowmen in southern Alberta had to discard the usual type of cow horse which they had been accustomed to use in the normal years. Owing to the softened surface of so much of the cow country, these were unequal to the strain of the round-up. Larger and stronger mounts of 1200 pounds proved necessary.

Such conditions in the firmer sod of the buffalo grass area were made even worse in the black-earth soils of the north, where even in the old days bull-trains could not operate.⁷ In June 1901, I bought

⁶ Some particulars, *ibid.*, 1: 353-362.

⁶ For these places and the stage era generally, see John Blue, *Alberta Past and Present* (3 vols., Chicago, 1924), 1: 309.

⁷ *Ibid.*, 1: 310; also C. M. MacInnes, *In the Shadow of the Rockies* (London, 1930), 175-79. A very good account of them is in Ernest Brown, *History of Alberta* (1928).

3 cows from a neighbour about 8 miles distant. Two of the 3, being tractable, I drove home alone the same afternoon. The third proved impossible. She would bolt into swampy thickets of brush where my horse could not enter without miring. Before I could mount after driving her out on foot, she would rush back in once more or across to another similar copse. A friend and I went next day—the cow having returned home in the night—and repeated the performance, with no better luck. The third day we took a bunch of cattle half-way and corralled them at a friend's place and rode forward to her old home. We brought her in a bunch of his cattle to the half-way point, transferred her, and so finally got her home. Six 'man and horse' days, and 4 'dog' days, to drive one cow 8 miles!

While life under such conditions was not particularly humorous, I recollect one comical incident which was described to me by the local participant in it. He was an old storekeeper who had retired from active work. He found interest in meeting the incoming trains from Calgary and acting as a reception committee of one to greet land-hunting newcomers. A tall American dropped off one day in 1900. It was raining as usual, and a gray pall reduced visibility to a mere blur beyond a half-mile range or less. 'Lookin' for land, sir? ...' 'Wa-al, I mebbe cal'late I might, if I like the look o' things ...'

'I'm afraid you're not seein' the country at its best right now; we've been gettin' a little *too* much rain around here lately. ... Come on in under the roof; don't stand out there in the rain ...'

'Stranger, I ain't a-comin' in under no goddam roof, for *nobody*. I'm from Kansas, I am ... *I hain't seen nothin' like this for fifteen year!*'

The extremely exceptional character of such a cycle—certainly in this excessive degree—seems reasonably to be proved by a most interesting fact which came under my own personal notice. I may add that my own empirical interpretation of the time element has since been endorsed by a foremost authority on the vegetation of Alberta.⁸ On the edge of the deep hay-slough in which I learned to swim in 1901 stood a clump of white poplar (*Populus tremuloides*), of fair size and age. The largest of all, about 24 feet in length and 12 inches or more in thickness at the butt, furnished the ridgepole for my log shack in 1897.

This clump of poplar stood almost waist-deep in water for 3 years. It is, I believe, generally accepted

that a tree can survive submergence to such depths for some few months and no more. Along the Mississippi in Illinois in June, 1942, I saw many large trees well under water; the river then was within a foot of flood level, as I was informed. It cannot be doubted that they had experienced this condition many times before; quite evidently also, such occasions must have been brief and transitory. My Alberta trees were killed by the drowning of their roots long before the three years were past. Obviously they could never have been subjected to such an immersion before, or they would not have grown to that size. Very possibly, too, an even lower water-level than waist-deep would have killed them at an earlier stage of growth. I have been informed by high ecological authority that a white poplar of that size would probably be about 70 years of age.⁹

This would mean that no such phenomenon as the wet cycle of 1899–1903 could have occurred in that district since *circa* 1830. The wide-spread extent and physical effects of this one raise a fair presumption that any similar one occurring before 1830 would be similarly far-reaching. This supposition finds some degree of negative support from the silence of the older residents of the north Saskatchewan territory concerning any such occurrence since about the last quarter of the eighteenth century. It seems actually to have been a climatic interlude.

Speaking purely as a layman observer without instruments or detailed records, and subject to correction from statistical data, the later ecological history of the area we have been discussing seems clearly to point to a degree of something like progressive desiccation. This has, of course, been varied by occasional luxuriantly wet summers, such as is being reported from the plains areas of Saskatchewan as I write (June, 1951). These have been abundantly sufficient in rainfall to ensure crops ranging from 'good' to a 'bumper.' At the same time they do not seem to have materially raised water-levels or changed the 'permanent' moisture-content noticeably.

An eminent climatologist may be quoted concerning causes of desiccation under certain conditions:—

The biological effect of the precipitation also depends on the proportion of it which sinks into the soil. ... Thick vegetation covering a soft soil checks the rate of run-off and allows a larger proportion of the

⁸ Professor E. H. Moss, Department of Botany, University of Alberta (Edmonton).

⁹ Exchange of information with Professor E. H. Moss to the present writer.

rainfall to be absorbed than does hard bare earth. This aspect of the rainfall has been brought out by the discussions of the desiccation of South Africa. In the past fifty years the country has been suffering increasingly from drought, but the conclusion from expert evidence is that this is not due to an actual decrease in the amount of rainfall, but to a change in the nature of the soil and vegetation. When South Africa was first settled, the country was covered by a rich vegetation, the rainfall was steady and persistent, and a large proportion of it was absorbed. The effect of over-pasturage has been to destroy much of the protective vegetation, and the soil has been washed away or trampled hard. The temperature contrasts have been increased owing to the heating effect of the sun on the patches of bare ground, and the rain now falls largely in "instability" showers, including destructive thunderstorms. The run-off is proportionately greater, owing to the more torrential nature of the fall and the loss of the vegetation, so that with nearly the same rainfall the amount of water available for use has decreased. The possibility of changes of this nature brought about by human activities has to be remembered in all discussions on the vexed question of "desiccation" in historic times; in fact a passage in Plato's "Critias" suggests that the decadence of Greece may have been due to such a change. . . .¹⁰

The relationship of climatic phenomena to their causes as described above is quite intelligible even to a layman; but the climatological history of Alberta within the historical era has apparently been different in some important respects. While 'human activities' in the forested areas north of the Saskatchewan River and westward, or in both directions from Edmonton have wrought wide changes, as already noticed, on the plains and prairie lands other conditions have prevailed.¹¹ I suspect that the only approach to over-pasturage that central Alberta has ever seen was in the heyday of the buffalo.¹² The small number of domestic or range cattle on the immense stretches of pasture area has always been a matter of comment. We have seen that at the close of the buffalo era and for some very considerable time after the June rains apparently maintained their proverbial regularity.¹³

Assuming as our starting-point a broadly equal

annual volume of rainfall during the past 50 years, certain results should apparently follow. The evaporation in a definite area at a given mean temperature during a specified period must surely be greater under cultivation than on a wholly or even preponderantly unbroken area of virgin prairie land. Certainly this should be the case in the earlier portion of the growing season before the crops have covered the ground closely. At the same time, *the rain having once fallen* into the soft well-tilled loam, it should be able to sink well in; the mere frequency and volume of those June rains of tradition should ensure a most abundant supply. Similarly, on large areas of prairie-land which had not been over-pastured since 1882 nor stripped of their protective vegetation nor trampled hard, and where—so long as our June rains do not fail—even annual fires do not injure the *herbage*, whatever they may do to the wood growth, the condition of luxuriant vegetable growth should persist. The residue of water from a well-charged soil—over a clay subsoil in huge tracts—should maintain creeks, marshes or sloughs, and smaller or larger lakes, at approximately their old maxima of level where no formal drainages have been effected.

As a result of much travel and careful observation in various sections of central Alberta during those years, I should place the peak-year in water-levels in 1915. This was a very wet summer, coming moreover at a time when water-levels as a whole had not fallen low enough to minimize its influence. Certain marshy localities nearby bore depths of water which, despite luxuriantly wet summers since—e.g., in 1923, 1927, 1928, 1934, 1935, 1937, 1940, 1942, 1944,—they have failed to maintain or equal. Wainwright Buffalo Park is some 127 miles southeast from Edmonton. In Wainwright Yard there is a small pot-hole; the main line of the Canadian National is built through it. In the summer of 1916 I swam frequently in this, well beyond my depth. This was the last year swimming was practicable. The level sank progressively, leaving the tell-tale high-water mark visible on the telegraph poles. Before 1924 the bottom was quite dry; and wet summers since then have failed to do more than accumulate a very few inches during the height of the rains. In July, 1914, I saw a man dive into the water at North Cooking Lake, east of Edmonton on the same railway route, in plain view from the railway station. Where he dived was quite close by the foot of the high fill on which the modern highway now runs, parallel with the railway track. Between the highway and the

¹⁰ C. E. P. Brooks, *Climate Through the Ages* (London, 1926), 194-95. On Greece and the Mediterranean, see my previous paper, "Early Agriculture in Western Canada," *Agricultural History*, 26: 104-23 (July, 1952).

¹¹ *Ibid.*

¹² See F. G. Roe, *The North American Buffalo* (Toronto, 1951), 361-63; 570-600.

¹³ See the present essay, above, p. 113.

water's edge there has been for over twenty years a dry beach of considerable width.

At a large marshy flat, locally known, from its ancient character, as 'The Buffalo Wallow,' some 2 miles west of Minburn, Alberta, on the Canadian National Vermilion route to Saskatoon—may be seen even more striking evidence of desiccation. In the buffalo era, these wallows on the grand scale were potential hay-sloughs on the outskirts, bearing a heavy crop of native grasses on a fairly smooth and firm surface. Toward the hollow center where the buffalo converged for their wallowings, the softer surface has been cut and torn by hoofs and horns until it is a mass of small rounded grassy hummocks with unspeakable quagmires of oozy filth between them, of problematical depth. At the height of the summer—since the buffalo perished—the hummocks are covered with waving grass; at a little distance these hummocks are not easily distinguishable by a stranger from the crop on the firm slough-bottom.¹⁴ In the larger and deeper of these depressions, still nearer the center was a lake, difficult and dangerous for large and heavy animals since the edges were soft and muddy and hidden from view by the rank growth of grasses. No domestic animal would approach these places, and the evidence indicates a similar timidity in the buffalo.

The Buffalo Wallow at Minburn reveals its own history and climatology during the years. The outer circle is now level pasture where grass does not grow heavy or long enough to be worth mowing. The hummocks are still there, embalmed, so to say, for all time, for the former quagmires between them are now a firm solid surface of close green turf, like the humps themselves. No one would plow it even if he could, for it is a mere gumbo clay; and no one could mow it if he would by reason of the irregular humpy surface. The cattle keep it very closely cropped, which insures a sweet, tender grass. This continual close-cropping reveals its contours and thereby its origin. For it could never

have been formed except by horns, hoofs, and mud. Farther in, what was clearly in former days the central lake, is now a clean firm bottom which the owners have fenced as a hay meadow and which yields heavy crops of hay even in dry seasons, and which wet seasons cannot flood. As a layman in climatology I am diffident in offering an opinion; but it seems difficult to explain this on any other supposition than a positive decrease in rainfall. There must have been a deviation from the conditions indicated in South Africa; otherwise, should not this central hollow have been kept better filled by the run-off from the hard-baked surface lands surrounding it? In the Alberta case the final drainage basins, creeks, lakes, and marshes, were themselves conspicuously affected.

Speaking again as a layman, is it not at least possible that the totally different conditions under which the North American West at large has been settled may have set in motion physical forces for which the entire previous history of climatology furnishes no precedent? Probably the history of the known world presents no parallel instance of such enormous land areas having been broken up (literally: *i.e.*, disintegrated) in almost solid masses, in such a relatively short space of time. I suppose the quite modern advent of machine power for such purposes renders the statement indisputable. We may ignore for the moment the known physical consequences of deforestation, properly so called. With reference to territories which possibly, in so far as we know, were never wooded, certain questions arise. Can we be sure that in addition to a greatly accelerated evaporation—which would operate as an evil counter balance in those very tracts which might expect exemption from the rainfall running off the surface—the destruction of the virgin sod which was all too seldom replaced, even in part, by a grass rotation of crops, and the exposure to the more unrestrained influences of sun and winds, may not on so large a scale result in a *positive* decrease in rainfall? Some such condition appears to be indicated by the Alberta phenomena described above. The South African data cited by C. E. P. Brooks, while denying any material change in the annual volume of rainfall, mention important modifications in its *character*. Have we any just ground for supposing that such forces of change cannot also govern volume of rainfall? With reference to the Alberta scene it is not entirely clear to what extent data in rebuttal, derived from lands or ages wholly different, are really relevant.

¹⁴I know whereof I speak. My father's homestead included a portion of hay-slough, the scene of our nudist fencing operations in 1900, deepening in the center to a miry buffalo-wallow, smaller than at Minburn. As an Albertan of a month's standing, I turned aside from my true direction one night (August, 1894) and found myself—not knowing why—having to scramble on hands and knees from hump to hump, narrowly escaping being mired. Buffalo were only some ten years extinct in that locality, many skeletons still remaining.

RESEARCH IN THE HISTORY OF AMERICAN LAND TENURE

A REVIEW ARTICLE

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It would be difficult to argue today that any problems in American History have been more constant, more pressing, or more vital in the life of the people than those relating to the original distribution of land and the resulting tenure and use. These problems have been borne in upon Americans increasingly during the past generation as a result of the population pressure on the supply of land, the spiraling of land values, and the growth of farm tenancy. Further contributing to the awareness of these problems is the startling decline in productivity of once high yielding areas and the destructive soil erosion with its silting of the streams, irrigation ditches and reservoirs. Historians and social scientists of various specialties have been attracted to the study of these problems in ever growing numbers and an extensive literature has emerged that provides much explanation and understanding. Indeed, so extensive has become the literature that experts in the United States Department of Agriculture as long ago as 1934 and 1938 prepared two bibliographies on *Land Settlement* and *Land Utilization* which contain with some duplication 5,570 items relating to the United States. Only a small portion of these items resulted from intensive research and study but nevertheless the number of references and the fact that such lists had to be prepared as a guide to them suggests the extent of concern for the problems.¹

The records of the original distribution of public lands and of subsequent land tenure and use problems fill a substantial corner in the National Archives and in the headquarters of the present Bureau of Land Management (formerly the General

Land Office), large sections in the archives of the forty-eight states, and hundreds of thousands of great folio volumes of deed, mortgage and probate transactions in 3,069 counties. Probably no comparable collection in scope and extent exists elsewhere in the world. The very vastness of the sources have served to repel all but the hardest of scholars from attacking any large segment of land tenure problems. Hence, studies have been mostly devoted to individual states or colonies, or to the operation of certain laws, or features of the overall problem.

Without attempting to mention all significant studies of early land problems any list of the works of outstanding merit in this field should include Beverley Bond on the quit rents, Roy Akagi on the town proprietors, Paul Evans, Helen Cowan, Neil McNall, Julian Boyd, Shaw Livermore and Thomas P. Abernethy on the great American land companies and Irving Mark and David Ellis on tenant discontent. To these special studies should also be added Curtis Nettels, *Roots of American Civilization* for its broad grasp of the land question and its relation to other basic issues.²

For the national period John Ise on forest and oil land policy, Fremont P. Wirth on Minnesota iron lands, Addison E. Sheldon and Joseph Schafer

¹ Louise O. Bercaw, A. M. Hannay and Esther M. Colvin, *Bibliography on Land Settlement with Particular Reference to Small Holdings and Subsistence Homesteads* (United States Department of Agriculture, *Miscellaneous Publication*, 172, Washington, 1934). Louise O. Bercaw and Annie M. Hannay, *Bibliography on Land Utilization, 1918-1936* (United States Department of Agriculture, *Miscellaneous Publication*, 284, Washington, 1938).

² Beverley Bond, *The Quit-Rent System in the American Colonies* (New Haven, 1919); Roy H. Akagi, *The Town Proprietors of the New England Colonies* (Philadelphia, 1924); Paul D. Evans, *The Holland Land Company* (Buffalo, 1924); Helen Cowan, *Charles Williamson* (Rochester, 1942); Neil A. McNall, *An Agricultural History of the Genesee Valley 1790-1860* (Philadelphia, 1952); Julian P. Boyd, ed., *The Susquehanna Company Papers* (4 vols., Wilkes-Barre, 1930); Shaw Livermore, *Early American Land Companies; Their Influence on Corporate Development* (New York, 1939); Thomas P. Abernethy, *Western Lands and the American Revolution* (New York, 1937); Irving Mark, *Agrarian Conflicts in Colonial New York, 1711-1775* (New York, 1940); David M. Ellis, *Landlords and Farmers in the Hudson-Mohawk Region, 1790-1850* (Ithaca, 1946).

on the disposal of the public lands in Nebraska and Wisconsin have long been key works.³ Recent investigations of Arthur R. Reynolds, Allan Bogue, and Thomas LeDuc on land frauds, farm credit and public land disposal in Kansas and Nebraska are promising.⁴ These studies all deal with narrow phases of land policies and land distribution, either horizontally or vertically, but collectively they provide with other studies already completed and others to come the basic information which will ultimately make possible a satisfactory general treatment.

Not that broad, overall studies of public land policies have never been undertaken, for they have, but with indifferent success. As far back as 1910 Payson J. Treat essayed this task for a limited period in his *National Land System, 1785-1820*. Though the first of the period studies, this remained until recently the best for it not only gave attention to the philosophy and motives behind the system but also showed to some degree how it worked. Raynor G. Wellington and George M. Stephenson followed with what were essentially

political histories of the land legislation adopted between 1828 to 1862. The last and the best of these period studies is that of E. Louise Peffer, *The Closing of the Public Domain, Disposal and Reservation Policies, 1900-1950*.⁵

Meantime, two useful general studies of the development of the public land policies in the National period were prepared by Benjamin H. Hibbard and Roy M. Robbins. Hibbard's *History of the Public Land Policies* retraces the story earlier told by Treat, Wellington and Stephenson, placing it more effectively in its proper setting and bringing it down to 1924 and providing some critical analysis of the various land laws and the way various critics said they operated. Though Hibbard relied largely on the reports of the Commissioners of the General Land Office and discussions in Congress, he brought to his study his knowledge of land and agricultural economics that enabled him to go well beyond them and to make his history useful even today. Robbins, *Our Landed Heritage, The Public Domain* again retraced the familiar story already well outlined by others but added to it greater familiarity with pre-emption, frontier living conditions, and the story of conservation. Robbins lacked the sure grasp of economics of Hibbard but had a better appreciation of the frontiersman's philosophy. Both studies are narrowly political, provide slight attention to the operation and administration of the land system, for the authors had not used in any intensive way the land entry records or correspondence and tell but a small portion of the story of the public lands.

Though an increasing tendency to turn away from the narrowly political studies of land policies is now discernible and the actual operation of the various land laws is coming under scrutiny, there still remain questions of paramount importance on which we have little but fragmentary information. Private land claims that comprise the basis of the early concentration of land ownership in California, Colorado, Arizona, Louisiana and Florida have scarcely been touched. Operation of the pre-

³ John Ise, *United States Forest Policy* (New Haven, 1920), and *United States Oil Policy* (New Haven, 1926); Fremont P. Wirth, *The Discovery and Exploitation of the Minnesota Iron Lands* (Cedar Rapids, 1937); Addison E. Sheldon, *Land Systems and Land Policies in Nebraska* (Lincoln, 1936); Joseph Schafer, *The Wisconsin Lead Region* (Madison, 1932), *Four Wisconsin Counties, Prairie and Forest* (Madison, 1927), and *The Winnebago-Horicon Basin* (Madison, 1937), and articles in *Wisconsin Magazine of History*. Roscoe L. Lokken, *Iowa Public Land Disposal* (Iowa City, 1942), is not up to the standard of Schafer and even Sheldon but has some information not otherwise easily available. Allusion should also be made to Sanford Mosk, "Land Policy and Stock Raising in the Western United States," and Margaret B. Bogue, "The Swamp Land Act and Wet Land Utilization in Illinois, 1850-1890," *Agricultural History* 17: 14-30 and 25: 169-180, (January, 1943, and October, 1951) which deal with a particularly neglected field of land policy, state management.

⁴ Arthur R. Reynolds, "The Kinkaid Act and its Effect on Western Nebraska," and "Land Frauds and Illegal Fencing in Western Nebraska," *Agricultural History* 23: 20-29, 173-179 (January and July, 1949); Allan G. Bogue, "The Land Mortgage Company in the Early Plains States," *Agricultural History*, 25: 20-23 (January, 1941), and his doctoral dissertation in the Cornell University Library; Thomas LeDuc, "The Disposal of the Public Domain on the Trans-Mississippi Plains: Some Opportunities for Investigation," *Agricultural History* 24: 199-204 (October, 1940).

⁵ The title of this excellent work is somewhat confusing for if, as Miss Peffer has argued elsewhere the term public domain should be applied to the reservations being created out of the original public lands of the United States there has not been and is not, at least as yet, any "closing." E. Louise Peffer, "Which Public Domain Do You Mean?" *Agricultural History* 23: 140-146 (April, 1949). Or should it be concluded that the author is arguing for or prophesying in her title that what some westerners wish is certain to come to pass?

emption, homestead and timber laws have not been intensively explored. No study has ever appeared of the transfer to private ownership of property in the first of the public land states, Ohio. All these and many other aspects of land policies and the original distribution of the public lands and of subsequent transfers of these lands need investigation.

A useful aid or manual in the systematic study of land distribution and tenure is Marshall Harris, *Origins of the Land Tenure System in the United States*. Instead of following Hibbard and Robbins in tracing the political and legislative evolution of policies of land distribution which would be an impossible task for thirteen colonies, at least until more spade work in many of the individual colonies has been done, or of concentrating on a cross section of land system of a certain period as did Treat, Harris has undertaken an analysis of the legal basis of rights to land and the nature of those rights. For all practical purposes, he confines his attention to the Colonial and Revolutionary period. Much that he says is in no sense new or freshly stated for he has made use of no documentary material that has not been worked over by scores of earlier writers, particularly by Herbert Levi Osgood, Charles McLean Andrews and Curtis Nettels. But he has brought within the scope of one volume analyses of the nature of land tenures in the thirteen colonies, thereby providing a convenient handbook for the use of agricultural economists and other social scientists who have not the time to work through more extended studies, or to go back to the original records.

Here are examined the Anglo-Saxon background of land tenures, especially those which were brought over to America. The nature of the original grants and charters are studied and the titles to land and limitations upon them are traced from colony to colony. Uniformly it is the legal structure and rights with which Harris is concerned and he barely touches and only incidentally the way the systems worked, the character of the ownership pattern. In the absence of adequate monographs he had to concentrate on but a small portion of the problem.

With his training highly specialized in agricultural economics it is understandable and indeed praiseworthy that the author begins his study by analyzing "The Nature of Land Tenure," borrowing heavily from George Wehrwein and the Wisconsin school whose influence has been so strong in government circles. Throughout the study this

same influence is apparent. Where the historian might be interested in the names of influential land grabbers and the numbers of head-rights they acquired, Harris is concerned with statistical analysis of the grants not entirely to the exclusion of important names but at least to the point that they are given slight attention. In such studies, individuals disappear in the flood of statistics and history becomes the mere barebones of the past, sterile and uninterpretive. Harris has not carried his study to the point of sterility but it is lacking in interpretation for nowhere in it can one find answers to the questions that Hibbard raised about the operation of the Federal land system and the groups which profited the most from it. Criticism and appraisal are kept to a minimum.

In providing a compendium of information on land tenure for thirteen colonies and more states in all of which there were variations great and small, Harris is forced to move back and forth constantly in his efforts to outline, for example, the headright system, policies toward Indian rights in land, quit rents, sales plans, grants to encourage schools, religion, industry and to reward military veterans. Useful as is this cross section or inter-colonial summary, it does not make for continuity of analysis within a colony. Furthermore, these summaries cannot replace or even compare with the fine treatment of quit rents by Bond, or with the masterly but, alas, unpublished account of "The Bounty Lands of the American Revolution in Ohio," by William T. Hutchinson. But this is as it should be. Harris has not sought to replace special treatments such as these but to incorporate the best of their work in so far as the institutional and legal background of land distribution is concerned with his own investigation into those problems which have not been as intensively studied and to produce a reference work that in the future will be the starting point of any study on early land problems, almost an encyclopedia of legal terminology and land tenures.

Land companies come in for review by Harris who relies heavily upon A. M. Sakolski's search for the spectacular in his *Great American Land Bubble* and Shaw Livermore's study of the influence on corporate development of the *Early American Land Companies*. Dependence upon secondary accounts, all of which either described companies which failed before they came into ownership of land or whose authors failed to find sufficient records to enable them to relate their history with any degree of success, makes this chapter like most

of the others lacking in the deeper significance of the problem. Had Nissenson carried on his study of the Rensselaer estate into the later period or had some of the documentary material and even secondary accounts of the land business of the Penn and Calvert families been studied, the results might have been more fruitful. Or, for that matter, had Harris used the two articles of Abbot Smith and Ray Billington, "The Indentured Servant and Land Speculation in Seventeenth Century Maryland," and "The Origin of the Land Speculator as a Frontier Type," he might have dealt more satisfactorily with the element that played "a major role" in the development of the American Frontier.⁴

Issue might be taken with the title of the chapter entitled "Emergence of the National Land System," the contents of which only loosely relate to the subject as I understand it. The chapter contains nothing on the Federal land system for the management of the public lands acquired by the cessions of the states, but attempts a summary of much that has been presented before. The summaries are useful, if that is what the reader wants, but they are repetitious.

Closer familiarity with conditions in colonial America, particularly New York, would have enabled the author to correct the view that the existence of "free land," or more properly cheap land, though even this is not defined, prevented the development of large holdings, manors, and tenancy. One of the less understood features of American land problems outside the plantation area of the South is the ease with which large landed estates were created, numerous of which have remained in close family hands for a century and more. Foundations of the great Wadsworth estate in New York were laid in the seventeen hundred and nineties, the far greater Scully estate in Illinois, Kansas and Nebraska was established in the eighteen hundred and fifties and seventies and many others were begun in the very pioneer period of the development of their area and the existence of cheap or truly free land not far from them did not prevent tenancy from developing on them that was distinctly characteristic of the old world. Loose writing of the existence of "free" land and the democratizing effect it had upon tenures, ownership and social conditions needs careful reconsideration.

⁴ *American Historical Review* 40: 467-472 (April, 1935); *Agricultural History* 19: 204-212 (October, 1945).

A major omission in *Origin of the Land Tenure System in the United States* is consideration of the granting and tenure policies of the British in Florida, the French in Michigan, Indiana and Illinois, and the French and/or Spanish in Missouri, Arkansas, Louisiana, Mississippi, Alabama and Florida. Before American occupation in these areas a variety of rights in the grants of land had been given to occupants, colony promoters, and political hangers-on that were quite alien to the systems being developed in the thirteen colonies. When American forces took over Florida, the Louisiana Purchase and the Old Northwest they could not, under the treaties with France, Spain and Britain, destroy these rights and tenures but had instead to recognize and confirm them. Thus, the titles to the best delta lands of the Lower Mississippi extending from below New Orleans to well above Natchez on which great sugar and cotton plantations flourished in the ante-bellum period have no origin in Anglo-Saxon law. There is nothing in Harris that aids the student in understanding the intricate and long sustained problem that confronted the Federal Government in dealing with these private land claims which contained well over ten million acres of the most highly prized lands in the early West and new South.

The ease with which a person may be drawn into error in generalizing about colonial land policies is seen in Harris' statement that "the metes and bounds system was used almost exclusively in the thirteen original colonies. . . ." For New England this is by no means accurate for here it was the practice to lay out rectangular townships which were surveyed into ranges and lots and assigned to proprietors in proportion to the number of shares they held. Similarly, in New York whole regions including all the Military Tract were surveyed prior to settlement and divided into lots. True, many of the tracts in these ranges and lots and portions thereof were described by metes and bounds but the ranges and lots aided materially in locating the land and, for that matter, they still do.

Harris also simplifies too much in saying that "The rectangular system was used in the twenty-nine land states." It was not used in the Virginia Military Tract of Ohio which constituted at least one ninth of the State. Nor was it used in substantial portions of Florida, Louisiana, California, New Mexico on the great private land claims that were confirmed.

Harris is not the only author who has miscon-

strued the history of the Dutch grants to the patroons and confused them with the large grants made by the English when they took over the New York colony. But one patroonship survived, the others being surrendered in the seventeenth century. However, it is important to know that tenures on some of the large manors given by the English were not in effect substantially different from those on Rensselaerwyck.

Extreme carelessness in the writing or in the gathering of notes in the research for this study made a hash of some sections. For example, on page 250 in a paragraph beginning "After the Revolution" Genesee lands of New York are stated to have sold at \$1.50 to \$4.00 an acre but on checking the reference it appears that such prices prevailed twenty-one years after the close of the Revolution. Nor is this all. The reference cited by Harris adds that the lands then selling for \$4 an acre only brought four shillings an acre twelve years earlier, or 1792. In the same paragraph, to make the matter more confusing and almost meaningless, Harris cites tracts in the same general area selling for one and two shillings an acre but on comparing with the reference it appears that he has cited one sale twice, once with the correct figure of one shilling six pence and the other time with the incorrect figure of one shilling per acre. From the same reference and in the same paragraph, Harris copied the consideration of 10,908£ which was paid for 67,130 acres but gives the number of pounds as the number of acres. For some odd reason or other he selected the sales outlined in the first three pages of this document, omitting the most important to Alexander McComb and makes no effort to compute the succeeding sales that altogether might have made his account of value. On top of these confused and unassimilated bits of information that are inaccurately copied, Harris shows in the following paragraph that New York adopted one shilling per acre as the minimum price for its land, which commonly was also the maximum price. Finally, he does not provide any help in determining the actual value of the depreciated currency which was acceptable in these purchases.

A more selective, more discriminating bibliography with brief appraisals of the chief works would have been much more valuable than the hit or miss aggregation of sources, collections, monographs, articles and local histories that are included in this study. True, the author uses the bibliography with an abbreviated system of text references to free

himself of dependence upon footnotes which partly explains why it is cluttered up with references to histories of towns, to collections of statutes, to publications of historical societies and to other items having no major relationship to the problems of land tenure. It does not explain why some of the most important treatments of land tenure problems in the seventeenth and eighteenth centuries are excluded. Where, for example, are such essential studies as St. G. L. Sioussat, "Breakdown of the Royal Management of Lands in the Southern Provinces," Viola F. Barnes, "Land Tenures in English Colonial Charters," T. J. Wertenbaker, *The Planters of Colonial Virginia*, Irving Mark, *Agrarian Conflicts in Colonial New York, 1711-1775*, Florence M. Woodard, *Town Proprietors in Vermont*, David H. Ellis, *Landlords and Farmers in the Hudson Mohawk Region*, Merrill Jensen, *Articles of Confederation and The New Nation*, Edith M. Fox, *Land Speculation in the Mohawk Country*, and E. Wilder Spaulding, *New York in the Critical Period*. The copy of Ruth Higgins, *Expansion in New York*, in the Cornell University Library which has been so worn by a generation of students as to call for replacement, remains the starting point for research on land problems in New York State in the eighteenth century but it is not listed by Harris.

Historians will question why Paxson, *History of the American Frontier* is listed when it has been so effectively displaced by Ray Billington, *Westward Expansion*, which is not mentioned; why, indeed, there are so many references to the works of Ackerman and Harris, Craig and Loomer, Haney, Kelso which have no relationship to colonial land tenures, or why the *Washington Evening Star* needs to be listed.

Somewhere in a book of this kind one might well expect to find reference made to Everett E. Edwards, *Bibliography of the History of American Agriculture* which, though it has been in print for a generation still remains an essential tool for every student of land problems, or why the Bercaw, Hannay and Colvin bibliographies previously mentioned in this review article find no space.

It may be worth while to suggest additional features of American land problems for which research is sadly needed. Comprehensive studies of land policies and their effects in such significant colonies as Pennsylvania (New York is fairly well covered though many details still need to be filled in) and North or South Carolina should contribute ma-

terially to effective synthesis of the Colonial period. Horizontal studies of ownership and use at the opening of the National period would be welcome. Painstaking combing of old financial records might make it possible to reconstruct the story of some of the major land companies outside of New York comparable to the admirable study by Paul D. Evans on the Holland Land Company. The whole story of the purchase or acquisition by other means of Indian titles needs study. In view of the enormous amount of research being currently conducted by lawyers for the Indians and for the government in the matter of land claims that were reopened by the Indian Claims Commission Act of 1946 much of this story for the National period may well be bared in the near future.

For the National period we need studies of the disposal of government land and the development of the ownership pattern in a number of states not unlike Sheldon's treatment of Nebraska and Schaffer's of Wisconsin. No one as yet has made any

careful and intensive investigation into the records of preemption, homestead and timber culture claims to determine the proportion of success and failure of those making the original filings, and the degree of use of these laws to block out large tracts for major economic interests. We need studies of the costs of farm making on the various frontiers, credit problems, land speculation, tax policies and their effects on absentee ownership, and tenancy. Such issues as the part property owners contributed to construction costs of railroads in areas which generously bonded themselves to bring in the iron horse call for investigation.

Greater attention should be paid to the publication of documentary materials relating to the original distribution of lands such as has been done by the Filson Club of Kentucky and by a number of the original states. Certainly, it is time the Federal Government recognize that documents other than those of politicians should be made available for students of the past.

BOOK REVIEWS

Flour for Man's Bread: A History of Milling. By JOHN STORCK AND WALTER DORWIN TEAGUE. (Minneapolis, University of Minnesota Press, 1952, 382 p., \$7.50).

This book, I believe, is unique as it arises out of what was originally projected as a Museum of Milling History. The authors state that "this volume brings to every reader many of the advantages of what was originally projected as a Museum of Milling History. It was planned to create life-sized moving dioramas to tell the story of the 'ancient and honorable' craft of milling from earliest times to the present day." It is this reviewer's opinion that the advantages of the alternative exceed the advantages of the original plan. Museums, of course, as sources of knowledge are limited by their accessibility but books possess no such limitation. Moreover, museums are essentially spectacles and leave much to the imagination of the uninformed viewer. Examination of actual objects may possess some merit, but illustrations and diagrams—which are replete in this volume—accomplish much the same purpose without the problem of space limitation that would have arisen had the original project been carried to completion. It is left to the reader to decide if, for example, a small scale cut-away model of a modern mill would prove superior to the illustrations contained in the book.

The central theme is the improvement in the technical processes of milling. The authors' goal is ambitious,

for the story begins some 75,000 years ago and ends in the twentieth century—from the time when grinding processes were confined to one's molars to the modern, semi-automatic mill of today. Despite the formidable span of time included in the volume, the treatment of all stages in the development of milling is more than adequate and highly successful in all respects. Nothing is left to the imagination of the student or interested reader.

The story will prove fascinating to students of history, whether their interest lies in the evolution of a process, a food, an industry, or man, for the story of one is inseparable from the others. In fact, it is a history of man in one of his constant battles with the physical environment in which he lives. The value of the volume to agriculturists, for example, is attested by the careful study given to the origin, evolution, distribution, and importance of wheat. At times, however, the reader may wonder if perhaps too much emphasis is placed on wheat. Wheat as the dominant cereal, even in Western society, is of recent origin, for as late as the Middle Ages barley was the most important bread crop, although wheat has always been preferred.

The volume is well organized and carefully edited. A vocabulary of milling terms and a list of reference matter is included. The numerous illustrations by Harold Rydell have been well chosen. After reading this book one must conclude that the authors have made a valuable contribution to agricultural history

by writing a very readable, carefully documented history of one of man's most important pursuits.
Kenneth W. Meinken, U. S. Agricultural Marketing Service

The English Countrywoman: A Farmhouse Social History A. D. 1500-1900. By G. E. & K. R. FUSSELL.
 (London, Andrew Melrose, 1953, 221 p., 30/-).

The authors of this nicely-illustrated volume set out to write a book that would be sound history and that, at the same time, would sell a sufficient number of copies to pay the authors for having written it. G. E. Fussell, as every reader of this journal knows, is an eminent historian. K. R. Fussell, who joined him in the preparation of the work, brings a woman's¹ viewpoint to a volume concerned with the woman's part in life on the farm. Thus, we have the happy combination of a popularly-presented history being written by authors professionally qualified to discuss the subject.

The life of the English countrywoman over four centuries has reflected in many ways the agricultural history of the same period. Perhaps the changes in the farmhouse have lagged behind the changes in the field, but they have come. Nevertheless, the authors' account leaves this reader with the impression that differences between the lives of the various economic classes at any one period were greater than the differences within a class over long chronological periods.

The good old days, according to the authors, were never really good, marked as they often were by inadequate food, clothing, and shelter in the farm workers' homes. Nevertheless, the stratification of society that was always evident during the period covered by this study took a new turn in the eighteenth and early nineteenth centuries. The well-to-do, landowner and farmer, grew richer and changed their way of living because they were able to live better; the less well-to-do became poorer and changed their way of living because they had to.

These class differences are an integral part of the discussion as the authors portray the way of life of each class during each major period. Included are descriptions of housing, food and food preparation, clothing, and social life, as well as an indication of the different farm tasks that were the lot of the countrywoman. The volume is a down-to-earth social history and a unique contribution to agricultural history. The authors have realized their first aim, that is, of writing a sound history. May their second aim be as well realized!

Wayne D. Rasmussen, U. S. Department of Agriculture

George Logan of Philadelphia. By FREDERICK B. TOLLES.
 (New York, Oxford Press, 1953, 381 p., \$5.00).

George Logan has deserved more than the slight paragraph and the curt footnote usually reserved for him in the pages of American history. Too long has this courageous and inflexible Quaker been ignored. It

was his misfortune to live among the giants of America's past, and walk only in the shadow of greatness. At the feet of Franklin he imbibed his first republican ideas. He was a self-appointed and uninvited adviser to presidents. And until now only Deborah Norris Logan, his beloved wife, [obviously a prejudiced observer] felt that he belonged to the ages, and in her *Memoir* has preserved a charming portrait of her husband and those exciting adolescent days of the Republic.

And now, one admirably fitted for the task, Frederick B. Tolles, permanent research fellow of the Huntington Library and Art Gallery in San Marino, California, and an authority on early American Quakers, has resurrected Dr. Logan from the musty archives of the past.

This is a timely biography, for it is the study of a man who dared to live by his ideals. How fitting it is that the story of the Logan Act should be recounted at this time. The American people, then as now, were torn apart by hidden fears and jealousies fed by the machinations of ambitious and power hungry politicians. Then as now the atmosphere was poisoned with charges, covert and open, that prominent Americans were involved in a conspiracy with a foreign power—France—to undermine the constitution and our republican institutions.

With remarkable restraint, supported by meticulous research, Dr. Tolles recounts the frenzied drive of the Federalists to retain control of the national government, whatever the costs might be. He depicts the sorry spectacle of Thomas Jefferson, the vice-president of the United States, darting through the back gate at Stenton, Logan's residence, to ward off spies who had kept a constant watch on his comings and goings. The eminent physician, Dr. Benjamin Rush, is seen in the despicable role of a shadow assigned to cover the movements of his colleague, Dr. Logan. And finally the reader is treated to a description of that shameful battle which took place on the floor of the House and which culminated in the passage of Logan's Law.

Dr. Logan's mission to France in those critical days in the summer and fall of 1798, when the issue of war and peace hung in the balance, undoubtedly marked the high spot of his career. One might have expected that his political fortunes would rise with those of the Republican party. But this was not to be. With sympathy but detachment, Dr. Tolles sketches his meager senatorial career and his subsequent falling out with the Jeffersonian Republicans.

As a straight political biography this study is excellent. Dr. Logan's niche, although a secondary one, is properly assessed. But Logan was more than a politician; he was a farmer and a highly successful one. There are many aspects of his career as a farmer that might have been fruitfully explored. What was the source of his fortune? It is true that he inherited lands from his father, but at the conclusion of the Revolutionary War, the lands were idle and the buildings

were in a state of decay or ruin. What products did he grow? Where and how were they marketed? How was the farm managed during his extended absences? Was he involved in land speculating? Answers to these and other similar questions might shed light on the tortuous shifts which characterized his political career.

Although one might quibble over these omissions, the reviewer must heartily agree with Dr. Tolles' general estimate of the man. George Logan was not a great man, but he was a good man.

William A. Sullivan, Michigan State College.

A New Home or Life in the Clearings. By CAROLINE MATILDA KIRKLAND, edited and with an Introduction by JOHN NERBER. (New York, G. P. Putnam's Sons, 1953, 308 p., \$5.00).

In 1835 William Kirkland, his wife, Caroline, and their small children left the East for Detroit, Michigan, where husband and wife conducted a newly opened female seminary until they moved to the frontier settlement of Pinckney, which Kirkland established in 1837. There they lived until they returned East in 1843, and there Mrs. Kirkland wrote her frontier classic, *A New Home*, which appeared in 1839. Long out of print, the book is once more available, with a brief introduction by John Nerber giving the details of Mrs. Kirkland's life and appraising her writings.

A New Home consists of a series of related sketches, "vignettes in chapter form," as Nerber calls them, picturing everyday life in a new western settlement. In a literary sense, Mrs. Kirkland was a pioneer realist, who chose to ignore genteel literary traditions and theories. To her, common people were worthwhile in themselves, a simple but sound point of view which Hamlin Garland and other realists revived at a later date.

The book is a valuable historical document. It presents the reactions of a well-educated eastern professional family to frontier life. Moreover, though residents of Pinckney resented some of Mrs. Kirkland's comments on their ways of living, she saw their virtues as well as their faults, and was never guilty of patronizing them. Like De Tocqueville, whom she read and admired, she was interested in ideas and ideals, and some of her comments on western democracy penetrate more deeply than his, perhaps because she actually shared in western living. Her comments on subjects like frontier speculation, wildcat banks, political rallies and donation parties are fair, but her real forte lay in describing the marrow of western life. Readers will become aware as never before that mosquitoes and wandering cattle and mud holes plagued the lives of early settlers more than did some of the more highly publicized problems, and that felling trees surpassed Indian fighting in danger on some frontiers. Mrs. Kirkland tells us how people ate, how they made fly traps, and how they achieved a measure of privacy in one-room log cabins by stretching cotton sheets from wall to

wall. One even becomes aware of degrees of affluence among log-cabin dwellers. Within the poorer homes the traveller found no well-stocked dresser, no snug curtains, no shining tins, no greeous piece-work bed quilts—not even the usual display of Sunday finery hanging from pegs along the bare walls. *A New Home* is social and intellectual history at its best.

Lewis E. Atherton, University of Missouri.

Gulf to Rockies; The Heritage of the Fort Worth and Denver-Colorado and Southern Railways, 1861-1890.

By RICHARD C. OVERTON. (Austin, University of Texas Press, 1953. Drawings by Reginald Marsh, xiv, 410 p., maps, photographs, \$5.00).

For the organization and movement of his history Mr. Overton is lucky that it describes the construction of two railroads one of which, the Denver, Texas and Gulf Railroad, was built southeastward from Denver ultimately to join hands with the Fort Worth and Denver City Railroad built northwest from Fort Worth through the Texas panhandle. Since he associates each enterprise with a railroad titan, the former with the visionary Governor John Evans of Colorado and the latter with General G. M. Dodge, the builder of the Union Pacific, he gets an additional measure of drama out of the building and operation of this somewhat off-beat railroad.

The book has everything to make it comprehensible and enjoyable: adequate maps, charts of organization, and pen decoration by Reginald Marsh. Does it have in addition a distinctive quality to recommend it to those who live hundreds of miles from its right of way or outside the company which financed its writing with such self-effacingness and self-restraint? Like other western roads, this had construction companies for which Mr. Overton makes a cautious defense. Undoubtedly the book's greatest contribution is the picture it gives of railroad executives at work. To contemporary critics of capitalists who asserted the latter were "unproductive," this volume would be a revelation of the effort and energy involved in dealing with the minute and the important things of railroad management. The handling of local complaints, the search for money, the making of treaties about rates and traffic, the alertness to meet interloping competitors as soon as they showed on the horizon—all these are here with immediacy and vividness. One is tempted to paraphrase for this volume the title of one of the most popular melodramas of the mid-nineteenth century, *Fifteen Years in a Fireman's Life*. This could be called *Twenty Years in a Railroad Administrator's Life*. Nor is the final curtain here. These business leaders saved their enterprise from the Union Pacific but they haven't brought it yet into a safe harbor. Probably the story will be a chapter in the larger history of the Chicago, Burlington & Quincy upon which Mr. Overton is engaged.

Edward C. Kirkland, Bowdoin College

Conservation Law and Administration. By WILLIAM F. SCHULZ. (New York, The Ronald Press Company, 1953, xxv, 607 p., \$10.00).

Here, for the first time, is held up to critical view the whole topsy-like pattern of statutory law and multi-headed bureaucracy by which a state tries to conserve game, fish, water, soil, forests and—so far as concerns his recreational needs—man. The state is Pennsylvania but non-Pennsylvanians will find much in the muddled pattern which characterizes fumbblings in their own states.

Laws about non-renewable resources, like oil and minerals, are not included, nor are use controls on non-recreational urban land. But there is careful attention to federal statutes and federal-state cooperative arrangements which impinge on Pennsylvania's resource problems. There is also a chapter on conservation education, another on legal devices for resource conservation and a model act for resource administration.

A fine introductory chapter of 44 pages summarizes the major findings and conclusions. This is well because some of the later chapters digesting the detail of game, fish and water law are heavy going. Perhaps it would have been better to relegate this detailed material to a pocket part appendix renewable after each legislative session.

Professor Schulz, who teaches law at the University of Pittsburgh, was aided by three law research associates and by an advisory committee mostly drawn from various departments of the University of Pittsburgh. The study was financed by a grant from The Conservation Foundation.

Much more is given than a bare bones outline of the legal skeleton of Pennsylvania's conservation program. There is a good deal of information about the functioning of laws; some telling points about the curbing effects of statutory ambiguities on effective administration and much clear proof that a wide gap often exists between passage of an act and the actual effectuation of its intended policy. The author ventures evaluations of Pennsylvania's conservation laws and their administration and his model act is a courageous series of suggestions for the elimination of administrative "flaws discovered in the existing laws."

Of particular interest to historians is the dramatic history of Pennsylvania's game laws. Here an advanced code reflected the influence of a few conservation leaders like John M. Phillips. But enforcement in the early years of the century was something else. In 1906, we are told, 14 game protectors were shot at, 7 were hit and 4 were killed. There was a Mafia-sponsored murder of a game protector, with the murderer ultimately being brought to justice by the clever work of a Pinkerton detective.

Also of interest is the detailed history of the running fight for the control of the state's soil conservation program between the agricultural extension service working out of State College and the U. S. Soil Con-

servation Service. Also recounted are the devastating effects of a succession of state supreme court decisions annulling no less than five attempts to encourage forestation through use of the tax power.

The history of each of the various conservation programs is adequately treated. The early Pennsylvania colonial forestry laws are missed, but, having in mind the purpose of the study, this is hardly a major omission.

Some might quarrel with the author's claim that "Anglo-Saxon man has been accustomed to cut his trees and to use his land pretty much as he sees fit. . . ." The remark might better have been limited to Anglo-Saxon, and other men, living in resource-drunk America in the 19th century. Even then there should perhaps have been a nod to fence laws, laws about strays and trespassing animals, weeds, nuisances, and drainage of surface water. In England Anglo-Saxon man has for centuries been familiar with land use restraints. Even putting aside the complicated subject of forest laws and the strict limitations on use of water in streams, life tenants, tenants for years and trustees in possession, occupying as they did a great deal of England's land, were by rigorous court-made case law subjected to onerous duties with respect to timber and soil. "Absolute property right" is a phenomenon peculiar to our 19th century when natural resources seemed inexhaustible.

But, this quibble aside, congratulations to Professor Schulz on a tremendous job well done.

J. H. Beuscher, University of Wisconsin, Law School

Sugar Country, The Cane Sugar Industry in the South, 1753-1950. By J. CARLYLE SITTERSON. (Lexington, University of Kentucky Press, 1953, 414 p., \$6.00).

Sugar Country, as a title, implies emphasis on the economic history of the cane sugar region of the Southern States. But in his preface, the author says he tried to make the story of the cane sugar industry more than an economic history filled with facts and figures. Rather he sought to present a picture of a regional culture founded on a single industry. This necessitated telling the story in its entirety.

Dr. Sitterson handled the dual subject skillfully. The book is scholarly and methodical, yet the facts are presented in good lively writing that holds the reader's interest, indicating that scientific method and dullness are not synonymous. Divided into two major parts—The Slavery Regime, 1753-1865, and The Modern Industry 1865-1950—chapters in each deal with (1) land and cane culture, (2) manufacture and marketing of sugar, (3) laborers, tenants, farmers, and planters, (4) costs, prices, and profits, (5) technical advances, and (6) the political problems of legislation, tariffs, and quotas.

This book is so clearly written, so temperate, and generally so firmly based on economic analysis of a large number of actual records that its conclusions are

convincing. This careful study of experience in sugar cane culture and sugar making in "Sugar Country" should do much to correct a widely accepted view that sugar cane producers have fought a stubborn but losing battle through the years and are destined eventually to be superseded by sugar producers of other regions and other countries.

The author is at his best in bringing together and analyzing the many plantation records and diaries that deal with day-to-day operations and annual reports of costs and returns of the cane sugar crop. Much information is included as to methods of cultivation and manufacture of cane sugar, as well as upon financing and marketing arrangements.

With the wealth of plantation, factory, sugar association, and sugar experiment station records available, Dr. Sitterson has exhibited insight and discrimination in the selection, development, and application of his analysis of the growth of the cane sugar industry and its place in the economy of the South. His efforts have shown that the historical aspects of the production and marketing of cane sugar are important to an understanding of this segment of the agricultural economy. His book points the way for greater use of original land and farm records in analyzing other agricultural industries of the South. Such a development is sorely needed.

Unique in the sugar cane plantation system was the combination of cane culture and sugar making under a single management. This dual type of enterprise early led to adoption of a wage labor instead of a share-cropper-tenant system following the abolition of slavery in 1865. Among the most persistent problems after 1880 were development of large central sugar factories with uniform supplies of cane drawn from nearby farms, and finding methods for setting fair prices for both buyers and sellers of cane. Gradually, however, a system was worked out to buy cane from farmers and tenants and to pay for it on a "scale" plan, with the price per ton determined by the sugar content and the current price of sugar. By 1950 nearly 60 per cent of the cane was produced on farms and sold to central sugar mills.

Throughout, Dr. Sitterson stresses the problems facing the cane sugar industry because of higher labor and other costs in the continental United States than in the insular territories and other countries. Thus, although production of cane sugar in the Southern States compares well with other farm crops in efficiency of farm labor, as measured by income (in the protected United States market), labor costs of production in Hawaii, Puerto Rico, Cuba, the Philippines, and possibly other countries are below those in continental United States. Furthermore, production of cane sugar fits in well with the soil and climate of certain Louisiana and Texas Gulf Coast areas and of the Florida Everglades. These conditions have set the stage for many decades of cane sugar production and they help to explain the contin-

uing interest of the sugar country of Louisiana and Florida in sugar legislation, in the form of tariffs, subsidies, and quotas for the different producing territories that supply sugar to the United States.

Although many of those in the cane sugar industry have felt themselves handicapped by national legislation on tariffs and quotas, the industry in Louisiana and Florida has survived the ravages of floods, freezes, drought, depressions, wars, and diseases mainly because of the persistence and resourcefulness of the producers. An illustration of the farsightedness of sugar cane producers was their establishment of a privately financed experiment station in Louisiana in 1885, which did outstanding work for some years in the study of cultural methods, tests, development of better varieties of cane, control of pests and diseases, development of cane machinery, and manufacturing sugar. Much of this experimental work was merged with the Louisiana Agricultural Experiment Station in 1895, but with continued contributions by producers for its support. Numerous results of the sugar cane experiment stations have been published. Adoption of the recommendations by planters attest to the value of this research.

While Louisiana produced 95 per cent or more of the total southern sugar crop for many years, sugar was also produced in Texas and intermittently during the nineteenth century in Florida, Georgia, and to a lesser extent in South Carolina, Alabama, and Mississippi. In the twentieth century a thriving sugar industry has been established in the Everglades region of Florida. Production of sirup and molasses from sugar cane is important in all these States.

From 1880 to 1910 Southern cane sugar made up about 10 to 12 per cent of all sugar consumed in this country. With the growth of population and the greatly increased consumption of sugar since 1920, Southern sugar has comprised less than 5 per cent of the sugar used.

Even though nationally the sugar cane industry supplies only a fraction of our needs for sugar, Dr. Sitterson emphasizes its importance to the people of the areas where adapted and on the basis of its history forecasts the survival of southern Louisiana and southern Florida as Sugar Country.

H. H. Wooten, Washington, D. C.

Diversified Agriculture of Hawaii; An Economist's View of Its History, Present Status, and Future Prospects.

By PERRY F. PHILIPP. (Honolulu, University of Hawaii Press, 1953, 226 p., \$3.75).

Many Americans who think of Hawaiian agriculture entirely in terms of sugar, pineapples, and grass skirts will be enlightened by this account. Mr. Philipp, who has had practical experience in the field working for the Agricultural Extension Service of the University of Hawaii as well as graduate training in economics at the University of California, Berkeley, has written a thorough if non-technical analysis of the production and

marketing of Hawaii's lesser farm commodities—taro, coffee, rice, fruits, nuts, vegetables, flowers, livestock and poultry. The author sees in the sound expansion of these products of diversified agriculture, for local consumption as well as for export, one important way of correcting a balance of trade that has been unfavorable to the Islands since the end of World War II. Essential to this expansion, he feels, are: a revision of the system of agricultural leases, an improvement of methods of disease and pest control through research and education, an acceleration in the process of mechanization, and promotion of higher labor productivity, the stimulation of the mainland market, and the development of better methods of farm management.

Although Mr. Philipp's survey is aimed primarily at the general reading public in Hawaii, others may find his account of some interest and his research references and statistics of some value. The author's emphasis is upon present problems and their solutions rather than upon their historical roots.

Clarke A. Chambers, *University of Minnesota.*

World Resource Statistics: A Geographic Sourcebook. By JOHN C. WEAVER AND FRED E. LUKERMANN.

(Minneapolis: Burgess Publishing Company, revised edition 1953, processed, spiral binding, card-board covers, 166 p., \$4.00).

World Resource Statistics is a useful compilation of facts about resources: population, land, power, resources, minerals, forests, fisheries, agricultural crops and livestock, industry, and trade. The authors have not only assembled information from several dozen sources, many of which are not commonly available, but have also performed the sizeable task of selecting, abstracting, and organizing the data so that they are suitable for historical and international comparisons. As a consequence, this statistical atlas is a handy reference volume for the personal library.

Consisting almost entirely of statistical tables, this book includes a bibliography and source references which will help a researcher who is looking for additional material. The authors have also provided blank base maps and graph paper to be used in working up graphic displays, and have thoughtfully left blank columns in many of the tables so that current data may be added as they become available.

C. W. Loomer, *University of Wisconsin.*

NEWS NOTES AND COMMENTS

AGRICULTURAL HISTORY SECTION

The Agricultural History Section of the Agricultural Marketing Service was abolished in April 1954. Its functions and personnel were combined with those of the Statistical Service Section to form the Statistical and Historical Services Section, headed by C. Kyle Randall.

EDWARDS AWARDS

The Everett Eugene Edwards Memorial Awards for the two best articles published in *Agricultural History* in 1953 were announced at the April meeting of the Society in Madison, Wis. Frederick D. Kershner, Jr. of Ohio University received the advanced Award for his article, "George Chaffey and the Irrigation Frontier." John T. Schlebecker of the University of Wisconsin Extension, Racine, won the pre-doctoral Award for his article, "Grasshoppers in American Agricultural History."

Because of the serious illness of the Secretary-Treasurer, the publication of the minutes of the April meeting of the Society must be deferred until a later issue of *Agricultural History*.

A.H.A. PROGRAM COMMITTEE

The committee in charge of arranging a joint program with the American Historical Association for the

New York meeting in December, 1954, consists of Albert V. House, Harpur College, chairman, Edgar L. Erickson, University of Illinois, and Robert G. Dunbar, Montana State College.

ACTIVITIES OF MEMBERS

Solon J. Buck, Assistant Librarian of Congress, will serve on the faculty of the Radcliffe College Institute on Historical and Archival Management during the summer of 1954.

G. E. Fussell of Fressingfield, England, is the author of "The Elizabethan Farmer," *History Today*, (November, 1953).

Thomas LeDuc of Oberlin College is the author of "State Administration of the Land Grant to Kansas for Internal Improvements," *Kansas Historical Quarterly*, 20: 545-552 (November, 1953).

James C. Malin of the University of Kansas has written and published a 455-page study entitled *The Nebraska Questions, 1852-1854*.

James C. Malin of the University of Kansas is the author of "Judge Lecompte and the 'Sack of Lawrence,' May 21, 1856," *Kansas Historical Quarterly*, 20: 465-494, 545-552 (August, November, 1953).

Wayne D. Rasmussen, U. S. Agricultural Marketing Service, discusses "The United States Astronomical

Expedition to Chile, 1849-1852," in *The Hispanic American Historical Review*, 34: 103-113 (February, 1954).

Earle D. Ross of Iowa State College is the author of "On Writing the History of Land-Grant Colleges and Universities," *Journal of Higher Education*, November, 1953.

Carl C. Taylor has been appointed regional director on community development in the Middle East by the Foreign Operations Administration. He will spend a year in India, Pakistan, Iran, Iraq, and Egypt.

Henry C. Taylor, past president of the Society, is the author of "Justice for the Farmer and the Rest of Us," *Land Economics*, 30: 1-11 (February, 1954).

Mildred Throne of the State Historical Society of Iowa is the author of "C. C. Carpenter in the 1858 Iowa

Legislature," *Iowa Journal of History*, 52: 31-60 (January, 1954).

Robert L. Tontz of Oklahoma A. & M. College is the author, with Jeppe Kristensen and C. Curtis Cable, Jr., of "Reliability of Deed Samples as Indicators of Land Market Activity," *Land Economics*, 30: 44-51 (February, 1954).

Charles W. Turner of Washington and Lee University discusses "The Chesapeake and Ohio Railroad in Reconstruction," *North Carolina Historical Review*, 30: 134-149 (April, 1954).

Colorado Agricultural and Mechanical College at Fort Collins has recently approved a new course in the history of American agriculture. It will be offered by J. C. McKinnon in the 1954 Summer Session and annually thereafter.

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New Directions in World Agricultural Policy	MORDECAI EZEKIEL
Needed Adjustments in Farming	R. P. CHRISTENSEN
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Interrelationship of Economic and Agronomic Concepts	JOHN C. REDMAN AND STEPHEN Q. ALLEN
A Fertilizer Production Service	EARL O. HEADY AND JOHN PESEK
Reclamation Under the Desert-Land Act	KARL S. LANDSTROM

This Journal contains additional articles, notes, and book reviews and is published in February, May, August, November, and December. Yearly subscription \$5.00.

Secretary-Treasurer: EARL BUTZ
Department of Agricultural Economics
Purdue University, LaFayette, Indiana

The Everett Eugene Edwards Awards in Agricultural History

The Agricultural History Society, in partial recognition of the outstanding services of Everett E. Edwards to the organization and in honor of his memory, has established the Everett Eugene Edwards Memorial Awards to be given to the authors of the two best articles (presidential addresses excluded) which are published in *Agricultural History* each year. One prize of \$50.00 is offered to an author who is in the course of taking a degree and one prize of \$50.00 to an author who is a more advanced scholar.

The Awards are financed from the Edwards Memorial Fund to which all members of the Society and other interested persons are invited to subscribe. However, the amounts necessary to pay the Awards for a period of ten years have been guaranteed by three of Edwards' former co-workers.

All articles to be considered for publication and other communications regarding editorial matters should be addressed to Vernon Carstensen, Editor, Department of Agricultural Economics, University of Wisconsin, Madison 6, Wisconsin. Address inquiries regarding the MEMORIAL FUND, MEMBERSHIP IN THE SOCIETY, and business matters to WAYNE D. RASMUSSEN, *Secretary-Treasurer*, U. S. Agricultural Marketing Service, Washington 25, D. C.

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JAMES WASHINGTON BELL, *Secretary-Treasurer*,
American Economic Association,
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